

Appendix A

Comparison of international Montreal Process indicators for sustainable forest management with Australia's national indicators for sustainable forest management

In reporting on the state of its forests, Australia uses the seven criteria developed in 1995 by the international-level Montreal Process Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests (Montreal Process Working Group 2009a, 2009b). Indicators are nested under each of these criteria.

In 1998, the national-level Montreal Process Implementation Group for Australia (MIG), which comprises representatives of the Australian Government and state and territory governments, adapted the Montreal Process set of indicators to better suit reporting on Australia's unique forests. However, some of Australia's original set of indicators proved difficult to measure, and some overlapped. In 2006, MIG reviewed the indicators and reduced the list used in Australia to 44 (Commonwealth of Australia 2008). This set of 44 national indicators underpinned SOFR 2008 and SOFR 2013, and again underpins SOFR 2018.

Table A1 shows the alignment of Australia's 44 national indicators with the 54 international indicators of the Montreal Process.

Table A1: Alignment of the international Montreal Process indicators with Australia's national indicators used in SOFR 2018

International Montreal Process criteria and indicators		Australian indicator(s) with which each Montreal Process indicator aligns		Australia's criteria and indicators		Montreal Process indicator(s) with which each Australian indicator aligns	
Indicator number	Indicator name	Strong alignment	Partial alignment	Indicator number	Indicator name	Strong alignment	Partial alignment
Criterion 1 Conservation of biological diversity							
1.1	Ecosystem diversity			1.1	Ecosystem diversity		
1.1.a	Area and percent of forest by forest ecosystem type, successional stage, age class, and forest ownership or tenure	1.1.a	1.1.b	1.1.a	Area of forest by forest type and tenure	1.1.a	–
1.1.b	Area and percent of forest in protected areas by forest ecosystem type, and by age class or successional stage	1.1.c	1.1.b	1.1.b	Area of forest by growth stage	–	1.1.a 1.1.b
1.1.c	Fragmentation of forests	1.1.d	–	1.1.c	Area of forest in protected area categories	1.1.b	–
				1.1.d	Fragmentation of forest cover	1.1.c	–
1.2	Species diversity			1.2	Species diversity		
1.2.a	Number of native forest associated species	–	1.2.a	1.2.a	Forest dwelling species for which ecological information is available	–	1.2.a
1.2.b	Number and status of native forest associated species at risk, as determined by legislation or scientific assessment	1.2.b	–	1.2.b	The status of forest dwelling species at risk of not maintaining viable breeding populations, as determined by legislation or scientific assessment	1.2.b	–
1.2.c	Status of on site and off site efforts focused on conservation of species diversity	–	–	1.2.c	Representative species from a range of habitats monitored at scales relevant to regional forest management	–	1.3.b
1.3	Genetic diversity			1.3	Genetic diversity		
1.3.a	Number and geographic distribution of forest associated species at risk of losing genetic variation and locally adapted genotypes	1.3.a	–	1.3.a	Forest associated species at risk from isolation and the loss of genetic variation, and conservation efforts for those species	1.3.a	1.3.c
1.3.b	Population levels of selected representative forest associated species to describe genetic diversity	–	1.2.c	1.3.b	Native forest and plantations of indigenous timber species which have genetic resource conservation mechanisms in place	–	1.3.c
1.3.c	Status of on site and off site efforts focused on conservation of genetic diversity	–	1.3.a 1.3.b				

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International Montreal Process criteria and indicators		Australian indicator(s) with which each Montreal Process indicator aligns		Australia's criteria and indicators		Montreal Process indicator(s) with which each Australian indicator aligns	
Indicator number	Indicator name	Strong alignment	Partial alignment	Indicator number	Indicator name	Strong alignment	Partial alignment
Criterion 2 Maintenance of productive capacity of forest ecosystems							
2.a	Area and percent of forest land and net areas of forest land available for wood production	2.1a	–	2.1a	Native forest available for wood production, area harvested, and growing stock of merchantable and non-merchantable tree species	2.a 2.b	–
2.b	Total growing stock and annual increment of both merchantable and non-merchantable tree species in forests available for wood production	2.1a	–	2.1b	Age class and growing stock of plantations	2.c	–
2.c	Area, percent, and growing stock of plantations of native and exotic species	2.1b	–	2.1c	Annual removal of wood products compared to the volume determined to be sustainable for native forests and future yields for plantations	2.d	–
2.d	Annual harvest of wood products by volume and as a percentage of net growth or sustained yield	2.1c	–	2.1d	Annual removal of non-wood forest products compared to the level determined to be sustainable	2.e	–
2.e	Annual harvest of non-wood forest products	2.1d	–	2.1e	The area of native forest harvested and the proportion of that effectively regenerated, and the area of plantation harvested and the proportion of that effectively re-established	–	–
Criterion 3 Maintenance of ecosystem health and vitality							
3.a	Area and percent of forest affected by biotic processes and agents (e.g. disease, insects, invasive species) beyond reference conditions	3.1a	–	3.1a	Scale and impact of agents and processes affecting forest health and vitality	3.a 3.b	–
3.b	Area and percent of forest affected by abiotic agents (e.g. fire, storm, land clearance) beyond reference conditions	3.1a 3.1b	–	3.1b	Area of forest burnt by planned and unplanned fire	3.b	–
Criterion 4 Conservation and maintenance of soil and water resources							
4.1	Protective function						
4.1.a	Area and percent of forest whose designation or land management focus is the protection of soil or water resources	4.1a	–	4.1a	Area of forest land managed primarily for protective functions	4.1.a	–
4.2	Soil						
4.2.a	Proportion of forest management activities that meet best management practices or other relevant legislation to protect soil resources	4.1b 4.1c	–	4.1b	Management of the risk of soil erosion in forests	4.2.a	–
4.2.b	Area and percent of forest land with significant soil degradation	–	–	4.1c	Management of the risks to soil physical properties in forests	4.2.a	–
4.3	Water						
4.3.a	Proportion of forest management activities that meet best management practices, or other relevant legislation, to protect water related resources	4.1d 4.1e	–	4.1d	Management of the risks to water quantity from forests	4.3.a	–
4.3.b	Area and percent of water bodies, or stream length, in forest areas with significant change in physical, chemical or biological properties from reference conditions	–	–	4.1e	Management of the risks to water quality in forests	4.3.a	–
Criterion 5 Maintenance of forest contribution to global carbon cycles							
5.a	Total forest ecosystem carbon pools and fluxes	5.1a	–	5.1a	Contribution of forest ecosystems and forest industries to the global greenhouse gas balance	5.a 5.b	5.c
5.b	Total forest product carbon pools and fluxes	5.1a	–				
5.c	Avoided fossil fuel carbon emissions by using forest biomass for energy	–	5.1a				

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International Montreal Process criteria and indicators		Australian indicator(s) with which each Montreal Process indicator aligns		Australia's criteria and indicators		Montreal Process indicator(s) with which each Australian indicator aligns	
Indicator number	Indicator name	Strong alignment	Partial alignment	Indicator number	Indicator name	Strong alignment	Partial alignment
Criterion 6 Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies							
6.1	Production and consumption			6.1	Production and consumption		
6.1.a	Value and volume of wood and wood products production, including primary and secondary processing	6.1a	–	6.1.a	Value and volume of wood and wood products	6.1.a	–
6.1.b	Value of non-wood forest products produced or collected	6.1b	–	6.1.b	Values, quantities and use of non-wood forest products	6.1.b	–
6.1.c	Revenue from forest based environmental services	6.1c	–	6.1.c	Value of forest based services	6.1.c	–
6.1.d	Total and per capita consumption of wood and wood products in round wood equivalents	6.1d	–	6.1.d	Production and consumption and import/export of wood, wood products and non-wood products	6.1.d 6.1.e 6.1.f 6.1.g	6.1.h
6.1.e	Total and per capita consumption of non-wood products	6.1d	–	6.1.e	Degree of recycling of forest products	6.1.i	–
6.1.f	Value and volume in round wood equivalents of exports and imports of wood products	6.1d	–				
6.1.g	Value of exports and imports of non-wood products	6.1d	–				
6.1.h	Exports as a share of wood and wood products production and imports as a share of wood and wood products consumption	–	6.1d				
6.1.i	Recovery or recycling of forest products as a percent of total forest products consumption	6.1e	–				
6.2	Investment in the forest sector			6.2	Investment in the forest sector		
6.2.a	Value of capital investment and annual expenditure in forest management, wood and non-wood product industries, forest-based environmental services, recreation and tourism	6.2a	–	6.2.a	Investment and expenditure in forest management	6.2.a	–
6.2.b	Annual investment and expenditure in forest-related research, extension and development, and education	6.2b	–	6.2.b	Investment in research, development, extension and use of new and improved technologies	6.2.b	–
6.3	Employment and community needs			6.5	Employment and community needs		
6.3.a	Employment in the forest sector	6.5a	–	6.5.a	Direct and indirect employment in the forest sector	6.3.a	–
6.3.b	Average wage rates, annual average income and annual injury rates in major forest employment categories	6.5b	–	6.5.b	Wage rates and injury rates within the forest sector	6.3.b	–
6.3.c	Resilience of forest-dependent communities	6.5c	–	6.5.c	Resilience of forest dependent communities to changing social and economic conditions	6.3.c	–
6.3.d	Area and percent of forests used for subsistence purposes	–	6.5d	6.5.d	Resilience of forest dependent Indigenous communities to changing social and economic conditions	–	6.3.d
6.3.e	Distribution of revenues derived from forest management	–	–				
6.4	Recreation and tourism			6.3	Recreation and tourism		
6.4.a	Area and percent of forests available and/or managed for public recreation and tourism	6.3a	–	6.3.a	Area of forest available for public recreation/tourism	6.4.a	–
6.4.b	Number, type, and geographic distribution of visits attributed to recreation and tourism and related to facilities available	6.3b	–	6.3.b	Range and use of recreation/tourism activities available	6.4.b	–

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International Montreal Process criteria and indicators		Australian indicator(s) with which each Montreal Process indicator aligns		Australia's criteria and indicators		Montreal Process indicator(s) with which each Australian indicator aligns	
Indicator number	Indicator name	Strong alignment	Partial alignment	Indicator number	Indicator name	Strong alignment	Partial alignment
Criterion 6 Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies (Continued)							
6.5	Cultural, social and spiritual needs and values			6.4	Cultural, social and spiritual needs and values		
6.5.a	Area and percent of forests managed primarily to protect the range of cultural, social and spiritual needs and values	6.4a 6.4b 6.4c	–	6.4a	Area of forest to which Indigenous people have use and rights that protect their special values and are recognised through formal and informal management regimes	6.5.a	–
6.5.b	The importance of forests to people	6.4d	–	6.4b	Registered places of non-Indigenous cultural value in forests that are formally managed to protect those values	6.5.a	–
				6.4c	The extent to which Indigenous values are protected, maintained and enhanced through Indigenous participation in forest management	6.5.a	–
				6.4d	The importance of forests to people	6.5.b	–
Criterion 7 Legal, institutional and economic framework for forest conservation and sustainable management							
7.1.a	Legislation and policies supporting the sustainable management of forests	7.1a	7.1b	7.1a	Extent to which the legal framework supports the conservation and sustainable management of forests	7.1.a	7.3.a 7.3.b
7.1.b	Cross-sectoral policy and programme coordination	–	7.1a 7.1b	7.1b	Extent to which the institutional framework supports the conservation and sustainable management of forests	–	7.1.a 7.4.a 7.5.b
7.2.a	Taxation and other economic strategies that affect the sustainable management of forests	7.1c	–	7.1c	Extent to which the economic framework supports the conservation and sustainable management of forests	7.2.a	–
7.3.a	Clarity and security of land and resource tenure and property rights	–	7.1a	7.1d	Capacity to measure and monitor changes in the conservation and sustainable management of forests	7.5.c	–
7.3.b	Enforcement of laws related to forests	–	7.1a	7.1e	Capacity to conduct and apply research and development aimed at improving forest management and delivery of forest goods and services	7.4.b	–
7.4.a	Programmes, services and other resources supporting the sustainable management of forests	–	7.1b				
7.4.b	Development and application of research and technologies for the sustainable management of forests	7.1e	–				
7.5.a	Partnerships to support the sustainable management of forests	–	–				
7.5.b	Public participation and conflict resolution in forest-related decision making	–	7.1b				
7.5.c	Monitoring, assessment and reporting on progress towards sustainable management of forests	7.1d	–				

–, no such alignment

References

- Commonwealth of Australia (2008). *Australia's Sustainable Forest Management Framework of Criteria and Indicators 2008: Policy Guidelines*, Commonwealth of Australia, Canberra. www.agriculture.gov.au/abares/forestsaustralia/Documents/ciframework.pdf
- Montreal Process Working Group (2009a). *Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests*, The Montreal Process, 4th edition. www.montrealprocess.org/documents/publications/general/2009/2009p_4.pdf
- Montreal Process Working Group (2009b). *Technical Notes on Implementation of the Montreal Process Criteria and Indicators*, 3rd edition. www.montrealprocess.org/documents/publications/techreports/2009p_2.pdf

Glossary

Numbers separate alternative definitions or uses.

Term	Definition and use
Abiotic	The non-biological components of the environment (e.g. climate, soil and water).
Above-ground biomass	All living biomass above the soil, including stump, stem, bark, branches and foliage, and attached material such as dead branches. <i>See Below-ground biomass, Biomass.</i>
Acacia	As a national forest type, forest dominated by trees of the genus <i>Acacia</i> .
Acidification	Increasing levels of acidity – for example, in soil – that can damage soil and vegetation.
Adaptive capacity (human)	Ability, or potential, of a community or individual to modify or change characteristics or behaviour to cope better with change or stresses. <i>See Community.</i>
Afforestation	Establishment of forest on land not previously forested. The Kyoto Protocol and initiatives such as the Carbon Farming Initiative use specific definitions of afforestation. <i>See Deforestation, Forest, Reforestation.</i>
Age class	Group of trees of a similar age. For example, a cohort of native forest trees regenerating after a disturbance event, or a set of plantations established in a given time-period.
Aggregated retention	A native forest silvicultural system in which clumps or clusters of trees are retained in forest stands harvested for wood. A form of variable retention. <i>See Silvicultural practices / systems, Variable retention.</i>
Agroforestry	<i>See Farm forestry.</i>
Apical dominance	Growth habit of a shoot whereby growth and development of lateral buds are suppressed.
Allowable cut	The average quantity of wood, usually prescribed in a legislative instrument or an approved management plan, permitted to be harvested from a forest management planning unit or region, annually or periodically, under management for sustained yield. <i>See Sustainable yield, Sustained yield</i>
Arboretum	A collection of living trees established at a single site at least partly for observation and scientific study. Plural: arboreta.
Arisings	Logs produced (arising) as a result of the harvest of logs of other species or of other grades, but that do not meet the size or quality specifications for those other species or grades.
Below-ground biomass	All biomass of live roots in the soil. (Fine roots are often excluded from measurement because it is difficult to separate these from soil organic matter.) <i>See Above-ground biomass, Biomass.</i>
Biodiversity	The variety of all life forms, plants, animals and microorganisms, their genes and the ecosystems they inhabit. <i>See Ecosystem diversity, Genetic diversity, Species diversity.</i>
Bioenergy	A form of energy derived from biomass, when biomass is used to generate electricity or heat or to produce fuels. <i>See Biofuel, Biomass.</i>
Biofuel	An energy source made from organisms and their products such as wood and plant matter, algae, or animal fats. <i>See Bioenergy.</i>
Biogeographic	Relating to the study of the distribution of living things.
Biological diversity	<i>See Biodiversity.</i>
Biomass	1. Material of biological origin (plant and other). 2. Living and dead organic material located above-ground and below-ground, for example, trees, grasses, litter, roots and soil organic matter (for purposes of carbon accounting).
Biome	A large, regional ecological unit, usually defined by some dominant vegetative pattern.
Bioregion	A large, geographically distinct area that has a common climate, geology, landform, and vegetation and animal communities. <i>See IBRA.</i>
Biotic	Used in reference to the biological components of the environment (e.g. plants, animals and other organisms).
Bole log	Log taken from the tree trunk between the ground and the crown break (the height of the first major branch).
Bole volume	Volume of a bole log.
Broadscale clearing	Clearing of large tracts of native vegetation. <i>See Forest clearing, Land clearing.</i>

Term	Definition and use
Bushfire	Fire started naturally (such as by lightning), accidentally or deliberately (such as by arson), but not in accordance with planned fire management prescriptions. <i>See Unplanned fire, Wildfire.</i>
Bushland	A general term in Australia for natural vegetation, covering any kind of habitat from open, shrubby country with scattered trees, to tall, closed forests.
Callitris	As a national forest type, forest dominated by trees of the genus <i>Callitris</i> .
Canopy	Uppermost layer of a forest comprising tree crowns, branches and leaves.
CAR reserve system	A forest reserve system that includes the full range of vegetation communities ('comprehensive'), with a level of reservation sufficiently large to maintain species diversity as well as community interaction and evolution ('adequate'), and conserving the diversity (including genetic diversity) within each vegetation community ('representative'). The CAR reserve system comprises dedicated reserves, informal reserves, and areas where forest values are protected by management prescriptions, as well as areas protected on private land. Dedicated, or formal, reserves are set aside for conservation through areas such as national parks. Informal forest reserves are areas set aside for conservation in forests that are otherwise production forests, such as special protection zones in state forests. In further areas, such as production forests, protection of values may be prescribed through management prescriptions in codes of practice or management plans; examples include components of the CAR reserve system that are not mappable in advance of their detection, and/or where inclusion in dedicated or informal reserves is impractical, such as riparian vegetation, or rare, dispersed or fragmented values. <i>See National Reserve System, Protected area, Vegetation community.</i>
Carbon accounting	Estimation of the amount of carbon stored in an ecosystem and changes in this amount.
Carbon credit	A tradable certificate, permit or legal instrument, deriving from a verified reduction of one unit (one tonne) of carbon dioxide emissions (or equivalent), and tradable to offset one unit (one tonne) of carbon dioxide emissions (or equivalent).
Carbon sequestration	Removal of carbon from the atmosphere and its storage in vegetation, soils or elsewhere.
Carbon sink	A carbon reservoir or pool that has the capacity to accumulate carbon.
Carbon source	A carbon reservoir or pool that has the capacity to release carbon.
Carbon stock	Quantity of carbon in a carbon reservoir or pool; the quantity of carbon stored in forests and wood products.
Carbon store	A carbon reservoir or pool. Forests and wood products are examples of carbon stores.
Casuarina	As a national forest type, Casuarina forest is forest dominated by any of four genera in the family Casuarinaceae; typically, forest dominated by trees of the genera <i>Allocasuarina</i> or <i>Casuarina</i> .
Certification	<i>See Forest certification.</i>
Certified forest	A forest that has been certified by an accredited, independent third party to comply with the requirements of a credible and recognised forest management standard. <i>See Forest certification.</i>
Chain of custody	A process of verifying the origin and supply of wood or timber product through the supply chain to a point of market. Generally, this applies to products from forests with forest certification or where products are legally harvested. <i>See Forest certification.</i>
Chlorosis	Yellowing or whitening of leaf tissue due to a lack of chlorophyll, typically caused by disease, changed drainage, plant nutrient deficiencies, damage to roots, or compaction of soil.
Clearfelling	A native forest silvicultural system in which all (or nearly all) the trees in an area are harvested in one operation, such that more than half of the harvested area is greater than one tree height from a retained forest edge. Clearfelling is generally used in native forest types dominated by shade-intolerant tree species. In the harvest of plantations, clearfelling is harvesting all the trees on a site. <i>See Silvicultural practices / systems.</i>
Clone	Genetically identical copies of a plant produced by tissue culture or vegetative reproduction.
Closed forest	Forest in which the tree crown cover ranges from over 80% to 100%. <i>See Open forest, Woodland forest, Crown cover.</i>
CO₂-equivalent (CO₂-e)	Measurement unit for the effect in the atmosphere of greenhouse gases relative to the effect of a unit of carbon dioxide (CO ₂).
Code of forest practice	A set of principles, procedures, guidelines and standards that defines and prescribes minimum acceptable practices in wood harvesting and associated forestry operations.
Commercial plantation	1. A National Forest Inventory forest category that comprises hardwood or softwood plantations managed commercially to supply logs to wood-processing industries for the manufacture of wood products. Previously known as Industrial plantation. 'Commercial plantation' does not include forest reported in the other two national forest categories, 'Native forest' and 'Other forest'. 2. A plantation reported through the National Plantation Inventory. <i>See Native forest, Other forest, Plantation.</i>
Commerciality	The expected volume yield of commercial sawlog or veneer log (or high-value equivalent) that is available over the long term, based on good silvicultural practices; derived from the combination of merchantability and productivity.
Community	1. Biological: a naturally occurring group of species inhabiting a particular area and interacting with each other, especially through biological relationships, relatively independently of other communities. 2. Human: a group of people associated with a particular place or geographic area.

Term	Definition and use
Community adaptive capacity (human)	See <i>Adaptive capacity</i> .
Community resilience (human)	The capacity of an individual, community or human system to absorb and respond to shocks while sustaining an acceptable level of function, structure, and identity.
Compaction	See <i>Soil compaction</i> .
Compliance audit	An audit of conformance to an environmental or forest management standard, silvicultural practice, or set of code of practice prescriptions. See <i>Code of forest practice</i> , <i>Forest certification</i> .
Conifer	Any taxon of the order Pinales (formerly Coniferales), a group of gymnosperms with characteristic reproductive structures called cones; includes Araucariaceae (araucaria family), Cupressaceae (cypress family), Pinaceae (pine family) and Podocarpaceae (podocarp family). See <i>Pine</i> , <i>Softwood</i> .
Connectivity	The degree of vegetation structural links between forest patches in a landscape, which facilitate species movement across habitat within the landscape context.
Conservation covenant	A voluntary, permanent, legally binding agreement made between a landholder and a covenant scheme provider to protect and enhance the natural, cultural and/or scientific values of a specified area of land. Conservation covenants are typically entered into for privately managed forest on private freehold or leasehold tenures; the provider can include not-for-profit organisations, government agencies or local councils. See <i>Conservation reserve</i> .
Conservation reserve	Area of land set aside to protect inherent environmental values. Development in, and use of, conservation reserves is usually restricted to activities that are compatible with conservation of the environmental values for which the reserve was declared. Conservation reserves include national parks, conservation parks and nature reserves, and informal reserves on public land, and are complemented by areas protected by conservation covenants on private land. See <i>Conservation covenant</i> , <i>Nature conservation reserve (Public)</i> .
Cording	The practice of placing large (5–30 centimetre diameter) woody material on extraction tracks before harvesting, to minimise soil erosion. See <i>Matting</i> .
Coverage	Digital representation of spatial data for a geographic unit or region, typically with attributes that describe a theme associated with the geographic unit. Usually created and used in geographic information systems.
Criterion	As used in Australia's State of the Forests reports, a category of conditions or processes by which sustainable forest management may be assessed. A criterion is characterised by a set of related indicators that are monitored periodically to assess change in conditions or monitor trends over time. See <i>Indicator</i> , <i>Montreal Process</i> .
Critically endangered species / ecological community	A native species / ecological community facing an extremely high risk of extinction in the wild in the immediate future. One of the categories of threatened species / ecological communities defined in the Commonwealth <i>Environment Protection and Biological Conservation Act 1999</i> . See <i>Ecological community</i> , <i>Endangered species / ecological community</i> , <i>Extinct</i> , <i>Extinct in the wild</i> , <i>Threatened ecological community</i> , <i>Threatened species</i> , <i>Vulnerable species / ecological community</i> .
Crown cover	The area of ground covered by tree canopies, ignoring overlaps and gaps within individual canopies.
Crown density	A property of tree crowns, measured as the proportion of light from the sky that is blocked from reaching the ground by living or dead plant material.
Crown land	Land belonging to the Crown, being a national, state or territory government, including Crown land under private leasehold title. See <i>Leasehold title</i> , <i>Other Crown land</i> , <i>Public land</i> .
Defined forest area	Area of forest under management control of an agency. In relation to the Australian Standard for Sustainable Forest Management (AS 4708), the area of forest (including land and water) to which the requirements of the standard are applied, and over which a forest manager can demonstrate management control, which allows them to achieve the requirements of that standard.
Deforestation	A type of land clearing involving the permanent removal of tree cover. The Kyoto Protocol and initiatives such as the Carbon Farming Initiative use specific definitions of deforestation. See <i>Afforestation</i> , <i>Forest</i> , <i>Reforestation</i> .
Degradation	1. Loss of specific aspects of a forest ecosystem, such as tree cover, structural features or species, or of habitat characteristics that support the requirements of species or communities, short of being defined as deforestation. 2. Reduction in the capacity of a forest to provide a range of goods and services.
Dieback	A symptom of disease agents or environmental factors in which foliage dies progressively from the extremities and trees exhibit loss of vigour; used in reference to native forests affected by cinnamon fungus (<i>Phytophthora cinnamomi</i>), salinity, drought or pest load, or by changed nutrient, water or fire regimes, or trees on land subjected to overgrazing.
Direct employment	The number of jobs in public and private agencies and firms relating to the process of producing goods or providing a service. Any secondary economic activity resulting from the primary activity is included in indirect employment. See <i>Indirect employment</i> .
Dry forest / dry sclerophyll forest	Typically, eucalypt-dominated sclerophyll forest associated with water-limited or nutrient-limited conditions, and with an understorey (if present) of sclerophyll trees or shrubs. Ground cover can be bare, litter, grassy or heathy. See <i>Eucalypt</i> , <i>Sclerophyll</i> , <i>Wet forest / wet sclerophyll forest</i> .

Term	Definition and use
Ecological community	A group of plants, animals and other organisms that are interacting in a habitat. See <i>Community</i> .
Ecological and/or ecosystem resilience	See <i>Resilience</i> .
Ecologically mature	Displaying a range of structural, functional and compositional attributes and ecological processes characteristic of forests in their mature or senescent growth stages. See <i>Mature, Old-growth</i> .
Ecologically sustainable forest management	The integration of commercial and non-commercial values of forests so that the welfare of society (both material and non-material) is improved, while ensuring that the values of forests, both as a resource for commercial use and for conservation, are not lost or degraded for current and future generations. Some jurisdictions have legislated principles of ecologically sustainable forest management that have to be considered in managing public forests. See <i>Sustainable forest management</i> .
Ecologically sustainable use	Use of natural resources within their capacity to sustain natural processes, while maintaining the life-support systems of nature and ensuring that the benefit of use by the present generation does not diminish the potential to meet the needs and aspirations of future generations.
Ecosystem	A dynamic complex of plant, animal and microorganism communities and their non-living environment, interacting as a functional unit.
Ecosystem diversity	The diversity of different ecological communities formed by living organisms and the relations among them. See <i>Biodiversity, Genetic diversity, Species diversity</i> .
Ecosystem services	The benefits (goods and services) provided by ecosystems, and the contributions that ecosystems make to human well-being, arising from both biotic and abiotic processes as well as their interaction.
Ecotourism	Tourism that features places of ecological interest, such as forests, and experience of the environment.
Edge effect	The effect or influence of an area of vegetation on an adjacent area of vegetation. This can include the effect of adjacent non-forest land on a forest stand, the effect of a forest stand on adjacent non-forest land, the effect of a mature forest stand on adjacent regenerating forest, or the effect of regenerating forest on an adjacent mature forest stand.
Endangered species / ecological community	A native species/ecological community facing a very high risk of extinction in the wild in the near future. One of the categories of threatened species / ecological communities defined in the Commonwealth <i>Environment Protection and Biological Conservation Act 1999</i> . See <i>Critically endangered species / ecological community, Ecological community, Extinct, Extinct in the wild, Threatened ecological community, Threatened species, Vulnerable species / ecological community</i> .
Endemic	Species of plant or animal that occurs naturally only in a specified region or country. See <i>Exotic, Indigenous (of species), Introduced species</i> .
Environmental compliance	Conforming to specified requirements in environmental laws, regulations, environmental management systems, management plans, planning specifications, codes of practice, standards and prescription guidelines. See <i>Code of forest practice, Environmental management system</i> .
Environmental management system	A framework for the systematic management of an organisation's environmental obligations and objectives.
Environmental planting	In a forest context, trees established for environmental benefit (rather than for commercial use) by direct seeding or planting that have the potential to attain a crown cover of 20% or more and a height of at least 2 metres. See <i>Commercial plantation, Other forest, Plantation</i> .
Environmental services	See <i>Ecosystem services</i> .
Eucalypt	1. Any member of the genera <i>Angophora</i> , <i>Corymbia</i> and <i>Eucalyptus</i> , being trees or large shrubs in the family Myrtaceae, mostly native to Australia. 2. As a national forest type, forest dominated by any of the three genera <i>Angophora</i> , <i>Corymbia</i> and <i>Eucalyptus</i> .
Even-aged forest	Native forest in which all trees are about the same age or of the same age class, even though they may vary in size because of their different rates of growth or location within the stand. See <i>Uneven-aged forest</i> .
Exclusion zone	Forest excluded from wood harvest or management operations as a result of the application of a prescription in a code of practice (such as for fire, forest or reserve management).
Exotic	Species of plant or animal that does not occur naturally in a region or country. See <i>Indigenous (of species), Introduced species</i> .
Ex situ conservation	The conservation of species and genetic components of biological diversity outside their natural habitats. See <i>In situ conservation</i> .
Extinct	A species for which there is no reasonable doubt that the last individual has died, or for which exhaustive surveys in known or expected habitats throughout its historical range have failed to record an individual over a time frame appropriate to its lifecycle and form. One of the categories of threatened species defined in the Commonwealth <i>Environment Protection and Biological Conservation Act 1999</i> .
Extinct in the wild	A species known to survive only in cultivation, in captivity or as a naturalised population well outside its past range, and that has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form. One of the categories of threatened species defined in the Commonwealth <i>Environment Protection and Biological Conservation Act 1999</i> .

Term	Definition and use
Farm forestry	Establishment and/or management of trees or forests on agricultural landscapes for commercial, aesthetic and/or environmental reasons. Also known as agroforestry.
Fecundity	The capacity of an individual or a species to reproduce or multiply. Can be measured as the rate of production of viable, fertile offspring that survive to reproductive age. See <i>Fertility</i> .
Fertility	The ability of an individual, population or species to sexually reproduce successfully. See <i>Fecundity</i> .
Fibreboard	A category of reconstituted wood panel products made from pulpwood and/or wood-processing residues such as woodchips, sawmill shavings and sawdust plus a resin or binder, pressed into panels. Types of fibreboard (in order of increasing density) include particleboard, medium-density fibreboard (MDF), high-density fibreboard and hardboard.
Fire regime	The frequency, intensity, seasonality and scale of burning of an area or vegetation type over a period of time. The history or forecast of fire events in a particular area or vegetation type.
Firewood	Wood used for residential heating. See <i>Fuelwood</i> .
Floriculture	Cultivation of flowering and ornamental plants.
Floristics	Study of the distribution and relationships of plants over a geographic area.
Forest	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%. 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.
Forest certification	A process whereby the quality of sustainable forest management is assessed and certified by an accredited, independent third party, against the criteria and requirements of a credible and recognised forest management standard. See <i>Certified forest</i> .
Forest clearing	Conversion of forested land to agricultural, urban or other non-forest land uses. See <i>Broadscale clearing</i> , <i>Land clearing</i> .
Forest-dependent community (human)	A community having an identified dependence on the forestry and wood products industries. See <i>Community</i> .
Forest-dependent species	A species that requires a forest habitat for at least part of its lifecycle, and that could not survive or reproduce in the absence of this habitat.
Forest-dwelling species	A species that may use a forest habitat for at least part of its lifecycle.
Forest health	The effects of the sum of the ecosystem processes (energy, nutrient, hydrological and biological processes) that together maintain the vitality of a forest ecosystem.
Forest land	Land carrying forest. Also called the forest estate. See <i>Forest</i> .
Forest management	A system of practices and activity for conservation, stewardship and productive use of forest land, aimed at fulfilling desired environmental, economic and social functions and objectives for the forest.
Forest management plan	A documented, long-term plan for a forest area that defines management goals, objectives and outcomes that are monitored and periodically reviewed, and that expressly includes the management of forest. Management plans can take many forms, including forest management plans; natural resource, environment and water catchment management plans that cover and include a focus on forests; and strategic management planning systems required for forest certification.
Forestry	The establishment and/or management of forests to meet desired goals, needs, and values, for human and environmental benefits.
Forestry operations	1. Work undertaken in the course of forest establishment and/or management for purposes including forest protection, public recreation, research, catchment protection and wood production. 2. Operational forest management activities related to wood production.
Formal reserve	See <i>CAR reserve system</i> .
Fragmentation	1. The degree to which forest exists in separate areas that are not spatially connected. 2. The process of loss of spatial connectivity between forest areas. See <i>Connectivity</i> .
Free-on-board value	The value of goods to the seller at the point of loading goods onto transport to overseas markets, excluding transport and insurance costs.
Fuel load	The total amount of combustible material in a defined area.
Fuelwood	Wood or wood products used as industrial fuel or for bioenergy production. See <i>Bioenergy</i> , <i>Firewood</i> .
Genetic diversity	The diversity of genetic information within and between individual species. See <i>Biodiversity</i> , <i>Ecosystem diversity</i> , <i>Species diversity</i> .
Genetic resources	Material of plant, animal, microbial or other origin that contains functional units of heredity and that has actual or potential value for humanity.
Genotype	The genetic constitution or make-up of an organism.
Geographic information system	A system for capturing, storing, analysing and managing data and associated attributes that are spatially referenced to the surface of the Earth. Commonly abbreviated to GIS system.

Term	Definition and use
Geospatial	Relating to the relative position of features on the surface of the Earth.
Girder	A specialised, large-dimensioned, durable timber product, usually in squared-end form, that is used in building bridges, wharves and the framework of large buildings.
Global carbon cycle	The movement of carbon between different parts of the Earth, biosphere and atmosphere, including the storage of carbon in those parts.
Grafting	A method of plant propagation, whereby a bud, shoot or tissue of one plant is joined with another plant.
Greenhouse gas	Gas that affects the temperature of the Earth's surface and climate, including water vapour, ozone, chlorofluorocarbons, carbon dioxide, methane and nitrous oxide. National inventories report anthropogenic emissions and removals of greenhouse gases not controlled by the Montreal Protocol on Substances that Deplete the Ozone Layer.
Green Triangle	1. A region straddling the state border between south-west Victoria and south-east South Australia where there are significant areas of plantations, as well as wood-processing facilities. 2. The National Plantation Inventory region of this name.
Green wood	1. Wood freshly harvested or milled that has not been dried. 2. Wood from live sandalwood trees that meets a specified quality standard and size.
Gross calorific value	The amount of heat released by a fuel during combustion under standard conditions.
Gross domestic product	The total market value of goods and services produced in a country in a given period, after deducting the cost of intermediate goods and services used in production (but not deducting allowances for the consumption of fixed capital, or depreciation). The sum of the value added by each industry across the economy. <i>See Industry value added.</i>
Gross value of production	Value placed on production at the wholesale prices realised in the marketplace (where the marketplace refers to local consumption, export, or a point before value-adding by a secondary industry). Gross value of production provides a value for products that do not have a final market price.
Group selection	A native forest silvicultural system in which groups (small patches or stands) of trees are harvested, allowing for subsequent regeneration and leading to a forest comprising patches of differently aged trees. <i>See Selection logging, Silvicultural practices / systems.</i>
Growing stock	The living tree component of the standing volume in a forest at a given time. <i>See Standing volume.</i>
Gymnosperm	A plant, such as a cycad or conifer, the seeds of which are not enclosed within an ovary. <i>See Conifer.</i>
Habitat	The environment where a plant, animal or ecological community normally lives or occurs. <i>See Ecological community.</i>
Habitat tree	1. A tree (alive or dead) containing hollows or crevices, where animals can live, breed or shelter, retained in a harvested area to provide habitat. 2. A tree with artificially created hollows to provide suitable nesting or shelter sites for endangered fauna.
Hardwood	Wood or wood products from flowering trees (broad-leaved tree species), such as eucalypts, irrespective of the physical hardness of the wood; also used to refer to the trees that have such wood, and plantations of such trees.
Harvested wood products	Wood products originating from harvested trees and removed from harvest areas for use as-is or after further processing.
Harvesting	1. As part of forest management, cutting (felling) of trees to produce wood products. 2. Collection (gathering) of non-wood forest products.
Heathland	A shrubland habitat found mainly on low-quality acidic soils and characterised by open low-growing woody vegetation. It forms extensive and highly diverse communities across Australia in humid and sub-humid areas. Heathland above 2 metres tall can also be classified as 'Other woody vegetation'. <i>See Other woody vegetation, Shrubland.</i>
Hybridisation	The process of crossing different breeds or cultivars of a single plant species, or crossing plants of different taxa (subspecies, species or genera). Hybridisation can occur naturally between closely related species.
IBRA (Interim Biogeographic Regionalisation for Australia)	A set of 85 bioregions within the Australian landmass, used as the basis for the National Reserve System's planning framework and some state-based reporting. <i>See National Reserve System.</i>
Indicator	1. As used in Australia's State of the Forests reports, an aspect of a criterion by which sustainable forest management may be assessed. 2. A quantitative or qualitative variable that can be measured or described and that, when observed periodically, demonstrates trends in forest condition or use. <i>See Criterion, Montreal Process.</i>
Indigenous (of people)	Of Aboriginal or Torres Strait Islander descent.
Indigenous (of species)	Species of plant or animal that occurs naturally in a specified region or country. <i>See Endemic, Exotic.</i>
Indigenous co-managed (of lands)	Lands that are owned and managed by non-Indigenous parties, and for which formal, legally binding agreements are in place to include Indigenous peoples and communities in the process of developing and implementing management plans. <i>See Indigenous managed (of lands), Indigenous owned and managed (of lands), Other special rights (of lands).</i>

Term	Definition and use
Indigenous estate (land or forest)	Land or forest over which Indigenous peoples and communities have ownership, management or rights of use for customary purposes. See <i>Indigenous co-managed (of lands)</i> , <i>Indigenous managed (of lands)</i> , <i>Indigenous owned and managed (of lands)</i> , <i>Other special rights (of lands)</i> .
Indigenous Land Use Agreement	A voluntary agreement between Native Title parties and other people. Native title is the recognition in Australian law that Indigenous people have rights and interests to land that come from their traditional laws and customs.
Indigenous managed (of lands)	Lands that are managed but not owned by Indigenous peoples and communities (e.g. Crown reserves and leases), and lands that are owned by Indigenous peoples and communities for which there are formal shared management agreements with Australian or state and territory government agencies. See <i>Indigenous co-managed (of lands)</i> , <i>Indigenous owned and managed (of lands)</i> , <i>Other special rights (of lands)</i> .
Indigenous owned and managed (of lands)	Freehold lands that are owned and managed by Indigenous peoples and communities. See <i>Indigenous co-managed (of lands)</i> , <i>Indigenous managed (of lands)</i> , <i>Other special rights (of lands)</i> .
Indigenous Protected Area	An area of Indigenous-owned land or sea for which traditional owners have entered into an agreement with the Australian Government to promote biodiversity and cultural resource conservation. See <i>Protected area</i> .
Indirect employment	The number of jobs in secondary economic activity resulting directly from a primary economic activity, in provision of materials, supplies, goods and services to support the primary activity, and generated or supported in retail and service sectors by the spending of salaries and wages of individuals and families included in direct employment. See <i>Direct employment</i> .
Industrial plantation	See <i>Commercial plantation</i> .
Industry value added	The value added by an industry to the inputs used by that industry; the contribution of that industry to Gross domestic product. In the Australia's State of the Forests Report series, 'Industry value added' excludes some downstream parts of the forestry, wood and paper products industries, particularly wholesaling, retailing and further value-adding (including the manufacturing of some commodities). See <i>Gross domestic product</i> .
Informal reserve	Reserve on public land protected through an administrative instrument by a public land management agency. See <i>CAR reserve system</i> .
In situ conservation	The conservation of species and genetic components of biological diversity in their natural habitats. See <i>Ex situ conservation</i> .
Integrated pest management	A pest control strategy that uses an array of complementary methods, such as natural predators and parasites, pest-resistant varieties, cultural practices, biological controls, various physical techniques and chemicals.
Introduced species	A species of plant or animal occurring outside its natural range (past or present) and dispersal potential—that is, outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans. See <i>Exotic</i> , <i>Indigenous (of species)</i> .
Jurisdictions	The Commonwealth, states and territories of Australia, in each of which its own system of laws has authority.
Key threatening process	A threatening process listed under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> . See <i>Threatening process</i> .
Land clearing	Removal of vegetation to convert land to another land use. See <i>Broadscale clearing</i> , <i>Forest clearing</i> .
Land tenure	Formal title, ownership or occupancy of land. See <i>Crown land</i> , <i>Leasehold forest</i> , <i>Multiple-use public forest</i> , <i>Nature conservation reserve</i> , <i>Other Crown land</i> , <i>Private forest</i> , <i>Unresolved tenure</i> .
Leasehold forest	Crown land held under leasehold title and generally privately managed. One of six tenure classes used to classify land in the National Forest Inventory. See <i>Crown land</i> , <i>Leasehold title</i> .
Leasehold title	Land title held under a contract by which one party conveys the land to another party for a specified time and purpose, usually in return for a periodic payment.
Legally binding instrument	An instrument, law, regulation, act or process that has associated legal rights, duties and/or requirements. See <i>Non-legally binding instrument</i> .
LiDAR (Light Detection and Ranging)	A technology that uses laser (light) pulses from (most commonly) an aircraft to collect information on terrain and vegetation features (such as tree height), based on the return time of pulses back to the sensor.
Litter	The uppermost layer of the forest floor consisting chiefly of fallen leaves, wooden debris and other decaying organic matter.
Log landing	A cleared area where harvested logs are laid or piled in stacks after being gathered from the site or sites of felling and before transport to a wood-processing facility.
Macroinvertebrate	Organism without a backbone, and of sufficient size to be seen without the aid of a microscope; examples are insects, shellfish and crustaceans.

Term	Definition and use
Mallee	1. A woody plant, usually a eucalypt, that is multi-stemmed from ground level. 2. A forest dominated by mallee species.
Managed investment scheme (MIS)	A pooled investment scheme that satisfies the definition of ‘managed investment scheme’ in Section 9 of the Commonwealth <i>Corporations Act 2001</i> and fulfils associated regulatory requirements; describes a wide range of investments in financial products, real estate, agriculture and plantation forestry.
Managed losses	Losses of carbon directly from forests to the atmosphere that are associated with the management of forests, for example prescribed burns or post-harvest burns.
Management effectiveness	A measure of how well a protected area, or system of protected areas, is being managed in terms of protecting values and achieving goals and objectives, based on an audit process or evaluation.
Mangrove	1. A tree or shrub that normally grows above mean sea level in the intertidal zone of coastal environments and estuarine margins. 2. The tidal habitat comprising mangrove trees and shrubs. 3. A national forest type dominated by mangrove trees.
Matting	The practice of placing small (less than 5 centimetre diameter) woody material on extraction tracks before wood harvesting to protect soil against heavy vehicle traffic and to minimise soil erosion. <i>See Cording.</i>
Mature	1. A native forest growth stage in which trees are at maximum height with crowns at full lateral development. 2. A native forest growth stage, generally taken as 80 or more years since disturbance. One of four growth stages used at the national level to describe the age of trees and stands of trees. <i>See Apical dominance, Ecologically mature, Regeneration, Regrowth, Senescent.</i>
Medium-density fibreboard (MDF)	<i>See Fibreboard.</i>
Melaleuca	As a national forest type, forest dominated by trees of the genus <i>Melaleuca</i> .
Merchantability	With respect to a tree or tree species, suitability for commercial wood products. An emphasis is placed on commercial production of sawlogs or high-value equivalents.
Merchantable tree species	A tree species with known commercial uses for wood products, based on standards, technology or market conditions. <i>See Non-merchantable tree species.</i>
MODIS (Moderate-resolution Imaging Spectroradiometer)	A remote-sensing technology carried on two Earth Observing System satellites, capturing data covering the visual and infrared spectrum and imaging the entire Earth every 1–2 days.
Monitoring	The periodic and systematic measurement and assessment of a value, attribute or indicator.
Montane	Ecosystems associated with mountain landscapes, alpine environments or higher elevations.
Montreal Process	1. The Montreal Process Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests (commonly, the Montreal Process Working Group). Currently comprises 12 countries. Australia is a member of the Montreal Process Working Group. 2. An initiative by the Montreal Process Working Group, comprising development and implementation of a comprehensive set of criteria and indicators for the conservation and sustainable management of temperate and boreal forests. <i>See Criterion, Indicator.</i>
Mosaic (of vegetation)	Vegetation composed of patches of different types, arising from differences in soil or landform or periodic disturbance (such as fire or wood harvesting).
Multi-leaders (of trees)	A condition in trees where the apical dominance of the shoot at the top of the plant is lost, allowing lateral buds to grow into two or more stems or leaders. <i>See Apical dominance.</i>
Multiple Lines of Evidence approach	With respect to mapping forests, compilation of data from a range of different sources, followed by assessment and validation to arrive at a best-possible dataset for the attribute being mapped.
Multiple-use public forest	Publicly owned state forest, timber reserves and other land on which a range of forest values – including provision of wood for harvest, water supply, conservation of biodiversity, recreation and environmental protection – are managed by state and territory government agencies in accordance with relevant Acts and regulations. One of six tenure classes used to classify land in the National Forest Inventory.
National Carbon Accounting System	<i>See National Greenhouse Gas Inventory.</i>
National Forest Inventory	Australia's system of integrated national forest data, compiled from state, territory and Australian government agencies and independent, remotely sensed data using national standards and protocols for collation and reporting. Used to meet national and international forest-related reporting requirements. Includes native forests, commercial plantations and other forests. <i>See National Plantation Inventory.</i>
National forest type	Any one of eight broad forest types (Acacia, Callitris, Casuarina, Eucalypt, Mangrove, Melaleuca, Rainforest, and Other native forest) into which Australia's native forests are classified in the National Forest Inventory. <i>See National Forest Inventory.</i>
National Greenhouse Gas Inventory	Australia's system for measuring and monitoring changes in greenhouse gas emission and sequestration; includes modelling of carbon stocks and stock changes. Previously referred to as the National Carbon Accounting System.
National Plantation Inventory	Australia's national inventory of commercial forest plantations; a program of the National Forest Inventory. <i>See National Forest Inventory.</i>

Term	Definition and use
National Reserve System	Australia's network of protected areas, conserving examples of natural landscapes and native plants and animals. The National Reserve System comprises Commonwealth, state and territory reserves, and protected areas on private land, Indigenous land, and land managed by conservation organisations.
National Vegetation Information System (NVIS)	A system developed by the Commonwealth, state and territory governments that provides information on the extent and distribution of vegetation types.
Native (of species)	A species located within its natural range. <i>See Non-native (of species).</i>
Native forest	A National Forest Inventory forest category that comprises national forest types dominated by the suite of native tree species naturally associated with forest in that location and located within their natural range. 'Native forest' does not include forest reported in the other two national forest categories, 'Commercial plantation' and 'Other forest'. <i>See National Forest Inventory, National forest type, Commercial plantation, Other forest.</i>
Nature conservation reserve	Crown land that is formally reserved for environmental, conservation and recreational purposes, including national parks, nature reserves, state and territory recreation and conservation areas, and some formal reserves in state forests as defined by jurisdictions. It does not include informal reserves and those pending gazettal. The commercial harvesting of wood and non-wood forest products is generally not permitted in nature conservation reserves. One of six tenure classes used to classify land in the National Forest Inventory. <i>See Conservation reserve, Crown land.</i>
Non-bole log	Log taken from the main trunk or branches of a tree above the crown break (the height of the first major branch). The non-bole material in mature trees is additional to the sustained yield.
Non-forest	Vegetation communities and habitats that are not forest, including marine environments, alpine meadows, other woody vegetation (including open woodland, heathland and shrubland), grassland, non-forest waterways and wetlands, rock outcrops, mudflats and farmland. <i>See Forest, Habitat, Other woody vegetation, Vegetation community.</i>
Non-forest land	Land that does not carry forest. <i>See Forest land.</i>
Non-legally binding instrument	A policy, recommendation or guideline, or a system of policies, recommendations and/or guidelines, with a defined intention that they be abided by to achieve a desired outcome, but without legal penalties for non-compliance. <i>See Legally binding instrument.</i>
Non-merchantable tree species	A tree species with no currently known commercial uses for wood products, based on standards, technology or market conditions. <i>See Merchantable tree species.</i>
Non-native (of species)	A species located outside its natural range. <i>See Native (of species).</i>
Non-production native forest	Native forest that is not managed for commercial wood production.
Non-vascular plant	A plant without a water-conducting system, including algae, liverworts and mosses.
Non-wood forest product	A product of biological origin, other than wood, derived from forests, including game animals, seeds, berries, chemical products, mushrooms, oils, foliage, medicinal plants, flowers, fodder, and wood and non-wood Indigenous artefacts.
Old-growth forest	Ecologically mature forest where the effects of disturbances are now negligible. <i>See Ecologically mature, Mature.</i>
Open forest	Forest in which tree crown cover ranges from over 50% to 80%. <i>See Closed forest, Woodland forest, Crown cover.</i>
Other Crown land	Crown land reserved for a variety of purposes, including utilities, scientific research, education, stock routes, mining, water-supply catchments, and use by Indigenous communities. Excludes leasehold forest, nature conservation reserve, and multiple-use public forest. One of six tenure classes used to classify land in the National Forest Inventory. <i>See Crown land.</i>
Other forest	A National Forest Inventory forest category that includes non-commercial plantations and planted forests that are not reported through the National Plantation Inventory but that satisfy the definition of forest. It includes farm forestry and agroforestry plantations, sandalwood plantations, environmental plantings, plantations within the reserve system, and plantations regarded as not commercially viable. Non-planted forests dominated by introduced species are also included in this category. 'Other forest' does not include forest reported in the other two national forest categories, 'Commercial plantation' and 'Native forest'. <i>See Forest, Commercial plantation, Native forest, Plantation.</i>
Other log products	Low-quality sawlogs, girders, poles, piles, other logs that are not sawlogs (including sliced veneer sawlogs) or pulplogs, wood used in mines, split and round posts, bush sawn/hewn timber and sleepers, and fuelwood logs and firewood. This category can also include other log types not included elsewhere, such as peeled veneer logs. Differs from the category 'Other wood products' in including fuelwood logs and firewood. <i>See Other wood products.</i>
Other native forest	A National Forest Inventory native forest type comprising forest types of minor extent such as Agonis, Atalaya, Banksia, Hakea, Grevillea, Heterodendron, Leptospermum, Lophostemon and Syncarpia (named after their dominant genera), as well as native forests where the type is unknown. <i>See National Forest Inventory, Native forest, Commercial plantation.</i>

Term	Definition and use
Other special rights (of lands)	Lands subject to Native Title determinations and active Indigenous Land Use Agreements. These are independent of tenure and, in most cases, do not grant ownership or management rights of land to Indigenous peoples and communities, but can provide for the right to access areas of cultural significance or a legal requirement for consultation with local Indigenous peoples and communities before major development activities take place. See <i>Indigenous co-managed (of lands)</i> , <i>Indigenous managed (of lands)</i> , <i>Indigenous owned and managed (of lands)</i> .
Other wood products	Low-quality sawlogs, girders, poles, piles, other logs that are not sawlogs (including sliced veneer sawlogs) or pulplogs, wood used in mines, split and round posts, bush sawn/hewn timber and sleepers; but not fuelwood logs or firewood. This category can also include other log types not included elsewhere, such as peeled veneer logs. Differs from the category 'Other log products' in excluding fuelwood logs and firewood. See <i>Other log products</i> .
Other woody vegetation	A non-forest vegetation type: open woodland, heathland or shrubland generally containing a tree component with actual or potential tree height greater than 2 metres, but either actual or potential tree canopy crown cover of 5–20% or combined cover of shrubs and trees greater than 10% but cover of trees less than 5%. See <i>Crown cover</i> , <i>Heathland</i> , <i>Shrubland</i> .
Overstorey	1. The uppermost layer of foliage in a forest. 2. Trees occupying the uppermost layer in a forest of more than one layer (storey).
Parasitoid	An organism that spends a significant proportion of its life attached to or within a single host organism, and that ultimately kills (and often consumes) the host.
Particleboard	A panel product made by compressing wood particles (usually from softwood) and resin under heat and pressure, commonly used in flooring and joinery. See <i>Fibreboard</i> .
Patch (of vegetation)	Basic unit of a landscape vegetation mosaic.
Pattern (of vegetation)	The spatial arrangement or configuration of vegetation, including forest, across the landscape.
Peeler log	A log suitable for rotary peeling to produce veneer. See <i>Veneer log</i> .
Photosynthesis	A process in plants in which energy from sunlight and carbon dioxide from the air are used to produce plant matter, releasing oxygen.
Pile (wood product)	A round-wood product that meets specified marine durability requirements and is used principally for wharves and to support the framework of buildings in a marine environment.
Pine	1. A tree of the genus <i>Pinus</i> in the family Pinaceae. 2. Can also refer to a tree of other conifer families, e.g. Araucariaceae, Cupressaceae and Podocarpaceae. See <i>Conifer</i> , <i>Softwood</i> .
Planned fire	Fire started in accordance with a fire management plan or planned burning program, such as fuel-reduction burning. See <i>Prescribed burn</i> , <i>Prescribed burning</i> , <i>Unplanned fire</i> .
Plantation	Intensively managed stand of trees of either native or exotic species, created by the regular placement of seedlings or seeds. See <i>Environmental planting</i> , <i>Commercial plantation</i> , <i>Other forest</i> .
Plant community	See <i>Community (definition 1)</i> , <i>Vegetation community</i> .
Planted forest	Forest comprising planted trees. For international reporting purposes, the 'Commercial plantation' and 'Other forest' National Forest Inventory categories (excluding forests of naturalised exotic species) comprise Australian 'planted forest'.
Plywood	A panel product made by gluing together veneers of wood under heat and pressure, commonly used in construction and joinery. See <i>Veneer</i> .
Pole	A round-wood product generally treated with preservatives that is used to support transmission lines or as a structural member in pole-frame building construction.
Post	A wood-product from durable hardwood or treated softwood species that is used in an upright support role and meeting specifications for a range of functions.
Prescribed burn	Fire started in accordance with a fire management plan or planned burning program, such as fuel-reduction burning. See <i>Planned fire</i> , <i>Prescribed burning</i> .
Prescribed burning	The controlled application of fire under specified environmental conditions to a predetermined area and at a time, intensity and rate of spread required to attain planned resource management objectives; also referred to as the use of planned fire. See <i>Planned fire</i> , <i>Prescribed burn</i> .
Private forest	Land held under freehold title and typically under private ownership. It excludes leased Crown land, and includes land held under freehold title with special conditions attached for designated Indigenous communities. One of six tenure classes used to classify land in the National Forest Inventory.
Privately managed forest	Forest that is managed under private ownership (including private land that is owned and managed by the Crown), as well as privately managed leasehold forest.

Term	Definition and use
Productivity	<ol style="list-style-type: none"> 1. Capacity of an ecosystem to grow, produce or yield products. 2. Amount of growth or product yield per unit area per unit time. 3. Potential annual volume growth of trees per unit area at peak mean annual increment in fully stocked forest stands.
Protected area	<ol style="list-style-type: none"> 1. General definition: a geographically defined area that is designated or regulated and managed to achieve specific conservation objectives (Article 2, Convention on Biological Diversity). 2. Specific definitions for reserve systems: an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (IUCN definition); a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (revised IUCN definition). <p>See <i>Indigenous Protected Area</i>.</p>
Protected by prescription	<p>Areas where protection of values is prescribed through management prescriptions in codes of practice or management plans or harvesting plans. Includes components of the CAR reserve system that are not always mappable in advance of their detection, and/or where inclusion in dedicated or informal reserves is impractical, such as riparian vegetation, or rare, dispersed or fragmented values.</p> <p>See <i>CAR reserve system</i>.</p>
Provenance	<ol style="list-style-type: none"> 1. The place of origin of a plant or animal. 2. A set of individuals of a plant or animal species that originate from a particular location.
Public forest	See <i>Publicly managed forest</i> .
Public land	<p>Land belonging to the Crown, i.e. a government, but excluding leasehold Crown land.</p> <p>See <i>Crown land, Leasehold title</i>.</p>
Publicly managed forest	<ol style="list-style-type: none"> 1. Forest on public land for which management responsibility has generally been delegated to government agencies, including multiple-use public forests, nature conservation reserves and other Crown land, but excluding leasehold forest. 2. Any forest on Crown land for which management responsibility has been delegated to government agencies, local governments or other instrumentalities. <p>See <i>Crown land, Public land</i>.</p>
Pulplog	<p>A log harvested from a plantation or native forest stand that does not meet sawlog quality specifications and is designated to produce pulpwood.</p> <p>See <i>Pulpwood</i>.</p>
Pulpwood	Wood used to manufacture pulp or paper products.
Rainforest	A national forest type that is dominated by rainforest species, typically in moist to wet or sheltered environments, and with broad-leaved species. Can include areas with up to 30% cover of non-rainforest species, typically as emergents, but where rainforest species dominate the character of the site.
Reconstituted wood products	Products manufactured from reconstituted wood fibres or flakes, originating from sources such as woodchips, sawdust, wood shavings or sawmill off-cuts. Includes fibreboard (particleboard, medium-density fibreboard, high-density fibreboard and hardboard) and laminated products (but not laminated veneer).
Recycling	The collection, separation and processing of previously used and recovered wood fibre and wood and paper products for manufacture into raw materials or new products.
Reforestation	<p>Establishment of forest on land that historically contained forest but was converted to some other use, such as agriculture. The Kyoto Protocol and initiatives such as the Carbon Farming Initiative use specific definitions of reforestation.</p> <p>See <i>Afforestation, Deforestation, Forest</i>.</p>
Regeneration	<ol style="list-style-type: none"> 1. A native forest growth stage that includes juvenile and sapling stages, where trees are very small and crowns exhibit apical dominance. 2. A native forest growth stage generally taken as less than 20 years since disturbance. One of four growth stages used at the national level to describe the age of trees and stands of trees. 3. New trees arising naturally or with human assistance after harvesting, fire or other causes have removed all or some of the overstorey. 4. The process of managing a forest after disturbance to produce a regenerating forest stand. <p>See <i>Apical dominance, Mature, Regrowth, Senescent</i>.</p>
Regional Forest Agreement	An agreement between the Australian Government and one of four state governments about the long-term management and use of forests in a region that meets the requirements listed in the Commonwealth <i>Regional Forest Agreements Act 2002</i> .
Regrowth	<ol style="list-style-type: none"> 1. A native forest growth stage in which trees generally have well-developed stems with crowns of small branches, and are actively growing in height and diameter but are below mature stand height. Apical dominance is apparent in vigorous trees. 2. A native forest growth stage generally taken as 20–80 years since disturbance. One of four growth stages used at the national level to describe the age of trees and stands of trees. <p>See <i>Apical dominance, Mature, Regeneration, Senescent</i>.</p>
Remote sensing	Practice of acquiring and using data from satellites or aircraft to infer or measure land cover, land use and vegetation attributes. May be used in combination with ground surveys to check the accuracy of interpretation.
Re-sawing	Cutting timber along the grain to reduce larger boards into smaller sections.
Research and development	Investigative work conducted to acquire knowledge, apply knowledge, develop or implement new products or procedures, or make significant improvements to existing products or procedures.

Term	Definition and use
Resilience (ecological and ecosystem)	The capacity of an ecological system to absorb and respond to shocks while retaining essentially the same function, structure and feedbacks, and therefore identity.
Resilience (human-community)	See <i>Community resilience (human)</i> .
Resolution (image)	Measurement of the output quality or detail of an image, usually given as pixel size (the size of the square areas recorded) or ground sample distance (the distance between adjacent pixel centres measured on the ground). Higher resolution means more image detail and smaller pixels; for example, an image with 1 m x 1 m pixels is of higher resolution than an image with 1,000 m x 1,000 m pixels.
Riparian zone	The interface between land and a flowing water body such as a stream or river. Plant communities along perennial watercourses are called riparian vegetation. See <i>Community (definition 1), Vegetation community</i> .
River regulation	The control or modification of the natural flow of a river or stream, most commonly by the use of dams.
Rotation	The planned number of years between regeneration or establishment of a stand of trees, and final harvesting. Rotation length is used in forest management planning to determine sustainable yield. See <i>Harvesting, Regeneration</i> .
Roundwood	Wood in round form, e.g. sawlogs, pulplogs, poles, piles, girders and posts.
Rural dieback	See <i>Dieback</i> .
Rut	A depression or groove worn into a snig track, path or road by machinery or erosion by water. Typically, rutting is reported in terms of rut depth. See <i>Snig track</i> .
Salinity / salinisation	The amount of salt in water or soil. Salinisation is the process of increasing salinity levels, such as occurs in soils and streams when saline groundwater rises towards the surface following clearing of forests for farmland.
Salvage harvesting	The harvest of trees that are dead or dying as a result of insect attack, disease, drought, fire or other factors.
Sandalwood	A native tree (e.g. <i>Santalum spicatum</i> , <i>S. lanceolatum</i>) or exotic tree (e.g. <i>S. album</i>) in the family Santalaceae, which yields fragrant timber and oil.
Savanna	A tropical or subtropical, woodland/grassland ecosystem with trees sufficiently widely spaced that adjacent tree canopies are not in contact. Areas of savanna where the canopy cover reaches or exceeds 20% are classified as woodland forest. Typically, rainfall is seasonal, and dry-season fires are frequent.
Sawlog	Log used to manufacture sawn timber. High-quality sawlogs are sawlogs meeting specified size and grade specifications (including amount of permissible defect). Low-quality sawlogs are sawlogs not meeting high-quality sawlog specifications.
Sawmill	A wood-processing facility in which logs are sawn by specialised machinery into timber such as boards.
Sawn timber	Timber produced by sawing logs into particular sizes; also called sawn wood.
Sawn wood	See <i>Sawn timber</i> .
Sclerophyll	A description of plants or vegetation that have tough leaves, such as eucalypts and acacias, adapted to dry or nutrient-poor conditions.
Seed orchard	A stand of trees planted and managed specifically for the production of genetically superior seeds.
Seed tree	A tree left standing in a harvested area for the purpose of providing seed for natural regeneration.
Seed-tree silviculture	A native forest silvicultural system in which trees are retained in a harvested area to provide seed for natural regeneration. See <i>Silvicultural practices / systems</i> .
Selection harvesting	A silvicultural system in which trees, typically above a certain specified size or growth stage, are removed singly or in groups, while other trees, such as regrowth, pole stems or habitat trees, are retained to maintain an uneven-aged forest. See <i>Group selection, Silvicultural practices / systems, Single-tree / small group selection</i> .
Senescent	1. A native forest growth stage older than mature, when irregular crowns form (sometimes referred to as 'over-mature'). 2. A native forest growth stage at various ages after 80 years since disturbance. One of four growth stages used at the national level to describe the age of trees and stands of trees. See <i>Apical dominance, Mature, Regeneration, Regrowth</i> .
Sensu lato (s.l.)	In the broad sense (of a taxon). See <i>Taxon</i> .
Shelterwood	A native forest silvicultural system of securing natural tree regeneration under a partially harvested overstorey, which is subsequently removed by successive harvest(s) to allow seedlings and young regeneration to occupy the site. See <i>Silvicultural practices / systems</i> .
Shrubland	A non-forest vegetation type dominated by woody plants that are multi-stemmed or single-stemmed. Shrubland above 2 metres tall can also be classified as 'Other woody vegetation'. See <i>Heathland, Other woody vegetation</i> .
Siltation	Deposition of silt (fine soil and mineral matter), usually related to the degradation of watercourses due to soil erosion.
Silvicultural practices / systems	Methods used in managing forest establishment, composition, growth, harvesting and regeneration. See <i>Aggregated retention, Clearfelling, Group selection, Seed-tree silviculture, Selection logging, Shelterwood, Silviculture, Single tree / small group selection, Variable retention</i> .
Silviculture	The art, science and technology of managing forests to achieve specified forest management objectives.

Term	Definition and use
Single tree / small group selection	A native forest silvicultural system in which single trees or small groups of trees of various ages are harvested; a method suitable for promoting regeneration of shade-tolerant species, or growth of preferred species or individual trees. <i>See Selection logging, Silvicultural practices / systems.</i>
Skeletal soils	Shallow soils, usually on ridges or steep slopes.
Slash	Tree debris left on site following harvesting events.
Snig track	A track along which logs are pulled (snigged) or conveyed from the place where the tree is felled to a nearby log landing or point of loading; also known as an extraction track.
Softwood	Wood or wood products from conifers, irrespective of the physical softness of the timber; also used to refer to the trees that have such wood, and plantations of such trees. <i>See Conifer.</i>
Soil compaction	A reduction in soil volume without loss of soil, leading to poor soil aeration, reduced drainage, and impeded root development.
Soil degradation	Any phenomenon that lowers the current and/or future capacity of the soil to support existing forest vegetation and ecosystems.
Soil erosion hazard	The susceptibility of soil to erosion, combining soil properties, site and climate factors, and management practices. Site factors can include slope, aspect, vegetation and drainage.
Soil moisture regime	The spatial distribution and annual variation in water availability in a soil profile.
Species diversity	The variety of species in an ecosystem. <i>See Biodiversity, Ecosystem diversity, Genetic diversity.</i>
Stand	A contiguous area within a forest that contains a cohort of trees that have a common set of characteristics. Normally a stand will be described or managed as a single unit.
Standing volume	The volume (excluding branches) above stump height of living or dead standing trees.
Statistical local area (SLA)	Base spatial unit at which the Australian Bureau of Statistics collects statistics across Australia.
Stocking	The density of a unit area of a forest stand measured as the number of trees, tree basal area, wood volume, or proportion of crown closure. Can apply to stocking of retained trees after harvest, or to the adequacy of seedling regeneration or planted stock. <i>See Stand.</i>
Subspecies	A taxonomically recognised subdivision of a species.
Sustainable development	Development that meets current needs without compromising the ability of future generations to meet their own needs.
Sustainable forest management	1. A set of objectives, activities and outcomes consistent with maintaining or improving a forest's ecological integrity and contributing to people's wellbeing now and in the future. 2. The practice of stewardship and use of forests and forest lands in such a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity and vitality, and their potential to fulfil, now and in the future, relevant ecological, economic and social functions at local, national and global levels, and that does not cause damage to other ecosystems. <i>See Ecologically sustainable forest management.</i>
Sustainable yield	The yield of products (e.g. wood, water) from an area of forest that ensures that the functioning of the forest ecosystem as a whole is maintained and the flow of products can continue indefinitely under a given management strategy and suite of sustainable-use objectives.
Sustained yield	In regards to wood, the yield that a forest area can produce continuously at a given intensity of management without impairment of the productivity of the land for a given period of time.
Taxon	A taxonomic unit in the classification of plants and animals (e.g. a subspecies, species or genus). Plural: taxa.
Tenure	Title to land as controlled by legislation. <i>See Land tenure.</i>
Threat	A natural, human-induced or human-exacerbated factor or process that increases the risk to a species of population reduction or extinction, or that creates a significant risk to the persistence or integrity of an ecological community. <i>See Ecological community, Threatening process.</i>
Threatened ecological community	An ecological community listed in any one of the following categories defined in the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> : critically endangered, endangered or vulnerable. <i>See Critically endangered species / ecological community, Ecological community, Endangered species / ecological community, Vulnerable species / ecological community.</i>
Threatened species	A species of native flora or fauna that is listed in any one of the following categories defined in the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> : extinct, extinct in the wild, critically endangered, endangered or vulnerable. <i>See Critically endangered species / ecological community, Endangered species / ecological community, Extinct, Extinct in the wild, Vulnerable species / ecological community.</i>

Term	Definition and use
Threatening process	<ol style="list-style-type: none"> 1. A process that threatens, or may threaten, the survival, abundance or evolutionary development of a native species or ecological community, as defined in the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>. 2. A natural, human-induced or human-exacerbated process that increases the risk to a species of population reduction or extinction, or is a significant risk to the persistence or integrity of an ecological community. 3. A process identified as a historical, current or future threat in listing or conservation advice of a threatened ecological community or species. <p>See <i>Ecological community, Key threatening process, Threat</i>.</p>
Timber	Products usually square or rectangular in cross-section milled from logs and that conform to industry grades, standards or specifications.
Traditional Owners	An Aboriginal and Torres Strait Islander group, people or community with traditional ownership of an area of country that has clear boundaries from the country of other groups. Traditional Owners have common social, cultural and spiritual affiliation and responsibility for their land, and usually have rights to forage on and guide management of that land.
Turbidity	The degree to which the clarity of water is reduced by suspended solids, silt, sediments or organic matter.
Turnover	Sales and service income for a business: the total value of sales of all goods and services, whether or not manufactured by the business (exclusive of goods and services tax, and not deducting the costs of inputs or intermediate goods and services).
Understorey	Layer or layers of vegetation beneath the main canopy or overstorey of a forest.
Uneven-aged forest	Forest with trees of more than one age or age class present on the same site. See <i>Even-aged forest</i> .
Unplanned fire	Fire started naturally (such as by lightning), accidentally or deliberately (such as by arson), but not in accordance with planned fire management prescriptions. See <i>Bushfire, Planned fire, Wildfire</i> .
Unresolved tenure	Land where data are insufficient to determine land ownership status. One of six tenure classes used to classify land in the National Forest Inventory.
Value-adding	The process of converting timber or forest products into one or more higher-valued products.
Variable retention	A native forest silvicultural system designed to meet both harvest objectives and ecological objectives through the retention of trees within an area planned for harvest, with the amount and configuration of retention dependent upon the silvicultural objectives for the stand; an alternative to clearfelling. See <i>Aggregated retention, Clearfelling, Silvicultural practices / systems</i> .
Vascular plant	A plant with conducting tissue that transports water, mineral salts and sugars; includes clubmosses, horsetails, ferns, gymnosperms (including conifers) and angiosperms (flowering plants).
Vegetation community	A naturally occurring group of plant species inhabiting a particular area and interacting with each other, especially through biotic relationships, relatively independently of other plant communities. See <i>Community (definition 1)</i> .
Veneer	Thin sheets of wood, usually thinner than 3 millimetres, which can be glued and pressed to make plywood, or glued and pressed onto core panels (typically wood, particleboard or medium-density fibreboard) to produce panels. Can be produced by slicing or peeling logs.
Veneer log	A log suitable for producing sliced veneer sheets. Excludes peeler logs used to produce rotary-peeled veneer. See <i>Peeler log</i> .
Vulnerable species / ecological community	A native species / ecological community facing a high risk of extinction in the wild in the medium-term future. One of the categories of threatened species / ecological communities defined in the Commonwealth <i>Environment Protection and Biological Conservation Act 1999</i> . See <i>Critically endangered species / ecological community, Ecological community, Endangered species / ecological community, Extinct, Extinct in the wild, Threatened ecological community, Threatened species</i> .
Water yield	The amount of water that flows out of a catchment (drainage basin).
Watershed	The dividing line between two catchments (drainage basins).
Watertable	The underground level at which the ground is saturated with water, where the water pressure is equal to atmospheric pressure.
Wet forest / wet sclerophyll forest	Typically, eucalypt-dominated forest (not dry forest or rainforest) associated with moist (mesic) conditions, and with an understorey (if present) dominated or co-dominated by rainforest species or non-sclerophyll shrubs. See <i>Dry forest / dry sclerophyll forest, Eucalypt, Rainforest, Sclerophyll</i> .
Wetland	Land consisting of swamps, marshes or mangroves. Forest wetlands are wetland ecosystems where forests are present. See <i>Mangroves</i> .
Wild harvest	Commodity harvested from the wild, including farming of wildlife and feral animals.
Wilderness	Land that, together with its plant and animal communities, has not been substantially modified by, and is remote from, the influences of European settlement, or is capable of being restored to such a state; is of sufficient size to make its maintenance in such a state feasible; and can provide opportunities for solitude and self-reliant recreation.
Wildfire	<ol style="list-style-type: none"> 1. A large destructive forest fire that spreads rapidly. 2. Fire started naturally (such as by lightning), accidentally or deliberately (such as by arson), but not in accordance with planned fire management prescriptions. <p>See <i>Bushfire, Unplanned fire</i>.</p>

Term	Definition and use
Wildlife corridor	An area or strip of suitable habitat designed to connect wildlife populations that have been separated by human activities.
Wildling	A plant of a plantation tree species that has grown independently in forest or land adjoining the plantation.
Windthrow	Trees uprooted or broken as a result of severe wind associated with storms; the process of uprooting or breaking trees in this way.
Wood	The hard, fibrous, underbark component of the stem and/or branches of a tree, often suitable for conversion into products.
Woodchips	Small chips of wood produced from logs for use in fibre products or for conversion to pulp for paper manufacture.
Woodland forest	Forest in which the tree crown cover ranges from 20% to 50%. See <i>Closed forest</i> , <i>Open forest</i> , <i>Crown cover</i> , <i>Other woody vegetation</i> .

References

- ABARE-BRS (Australian Bureau of Agricultural and Resource Economics – Bureau of Rural Sciences) (2010). *Indicators of Community Vulnerability and Adaptive Capacity across the Murray–Darling Basin – A Focus on Irrigation in Agriculture*. Report to the Murray–Darling Basin Authority, ABARE–BRS, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics) (2014). *Australian forest and wood products statistics, September and December quarters 2013*. ABARES, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences) (2016a). *Australia's plantation log supply 2015–2059*. ABARES, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences) (2016b). *Australian plantation statistics 2016*. ABARES, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics) (2017a). *Agricultural commodities: June Quarter 2017*. ABARES, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics) (2017b). *Australian forest and wood products statistics, March and June quarters 2017*. ABARES, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics) (2017c). *Australian forest and wood products statistics, September and December quarters 2016*. ABARES, Canberra.
- ABARES (Australian Bureau of Agricultural and Resource Economics) (2018). *Australian forest and wood products statistics, September and December quarters 2017*. ABARES, Canberra.
- Abbott I and Williams MR (2011). Silvicultural impacts in jarrah forest of Western Australia: synthesis, evaluation and policy implications of the FORESTCHECK monitoring project of 2001–2006. *Australian Forestry* 74:350–360.
- ABS (Australian Bureau of Statistics) (2006). *Census of Population and Housing*. ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2011). *Census of Population and Housing*. Findings based on use of ABS TableBuilder data.
- ABS (Australian Bureau of Statistics) (2013a). *Information Paper: Towards the Australian Environmental-Economic Accounts, 2013*. Cat. no. 4655.0.55.002, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2013b). *Labour Statistics: Concepts, Sources and Methods, 2013*. Cat. no. 6102.0.55.001, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2014). *Australian Industry, 2012–13*. Cat. no. 8155.0, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2015a). *Australian System of National Accounts: Concepts, Sources and Methods*. Cat. no. 5216.0, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2015b). *Research and Experimental Development, Businesses, Australia, 2013–14*. Cat. no. 8104.0, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2016a). *Australian System of National Accounts, 2015–16*. Cat. no. 5204.0, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2016b). *Census of Population and Housing*. Findings based on use of ABS TableBuilder data.
- ABS (Australian Bureau of Statistics) (2017a). *Australian Environmental-Economic Accounts, 2017*. Cat. no. 4655.0, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2017b). *Australian Industry, 2015–16*. Cat. no. 8155.0, ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2017c). *Consumer Price Index Calculator* (Consumer Price Index, Cat. no. 6401.0). ABS, Canberra.
- ABS (Australian Bureau of Statistics) (2017d). *International trade, Australia*. Cat. no. 5465.0, ABS, Canberra. Accessible via subscription to *Information Consultancy Services*, Cat. no. 9920.0, ABS, Canberra. www.abs.gov.au/ausstats/abs@nsf/mf/9920.0
- ABS (Australian Bureau of Statistics) (2017e). *Research and Experimental Development, Businesses, Australia, 2015–16*. Cat. no. 8104.0, ABS, Canberra.
- AFAC (Australasian Fire and Emergency Service Authorities Council) (2012). *Bushfire Glossary*. AFAC, Melbourne. www.afac.com.au/initiative/burning
- Ahmad Termizi AA, Hardner CM, Batley J, Nock CJ, Hayashi S, Montenegro JD and Edwards D (2016). SNP analysis of *Macadamia integrifolia* chloroplast genomes to determine the genetic structure of wild populations. *Acta Horticultura* 1109:175–180. doi.org/10.17660/ActaHortic.2016.1109.29
- ANZECC (Australian and New Zealand Environment and Conservation Council) (2001). *National Approach to Firewood Collection and Use in Australia*. Australian and New Zealand Environment and Conservation Council, Canberra. nepc.gov.au/system/files/resources/378b7018-8f2a-8174-3928-2056b44bf9b0/files/anzecc-gl-national-approach-firewood-collection-and-use-australia-200106.pdf
- ANZECC and MCFFA (1997). *Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System of Forests in Australia*. Report by the Joint Australian and New Zealand Environment and Conservation Council/Ministerial Council on Forestry, Fisheries and Aquaculture National Forest Policy Statement Implementation Sub-committee, Australian Government, Canberra.
- ASBP (Australian Seed Bank Partnership) (2011). *Australian Seed Bank Partnership Business Plan 2011–2020 – Safeguarding Australia's Flora through a national network of native plant seed banks*. CHABG Inc., Canberra. www.seedpartnership.org.au/sites/default/files/files/2014-01-29%20ASBP_BusinessPlan2011-2020_Revised.pdf
- ASBP (Australian Seed Bank Partnership) (2016). *Annual report 2015–16*. ASBP, Canberra.
- Atkinson G (2012). Soil erosion following wildfire in Royal National Park, NSW. *Proceedings of the Linnean Society of New South Wales* 134:B25–B38.

- Australian Social Inclusion Board (2009). *Building Inclusive and Resilient Communities*. Australian Government, Canberra. www.emergencyvolunteering.com.au/docs/Building_Inclusive_and_Resilient_Communities.pdf
- Baker SC and Read SM (2011). Variable retention silviculture in Tasmania's wet forests: ecological rationale, adaptive management and synthesis of biodiversity benefits. *Australian Forestry* 74:218–232. doi.org/10.1080/00049158.2011.10676365
- Baker SC, Grove SJ, Forster L, Bonham KJ and Bashford D (2009). Short-term responses of ground-active beetles to alternative silvicultural systems in the Warra Silvicultural Systems Trial, Tasmania, Australia. *Forest Ecology and Management* 258:444–459. doi.org/10.1016/j.foreco.2009.03.044
- Barlow KM, Weeks A and Christy B (2013). *Modelling the response in streamflow to increased forestry plantations*. 20th International Congress on Modelling and Simulation, 1–6 December 2013, Adelaide, Australia.
- Bartlett AG (2016). The evolution and impacts of ACIAR's forestry research program over three decades. *Australian Forestry* 79:171–188.
- Bassett O, Runnalls R, Fagg P, Cumming F and Keppel P (2013). *Review of Commercial Forestry Management in Western Victoria: Timber Resources, Harvest Levels, Silviculture, and Systems and Processes*. Forest Solutions report to the Victorian Department of Environment and Primary Industries, Melbourne.
- Bastin J F, Berrahmouni N, Grainger A, Maniatis D, Mollicone D, Moore R, Patriarca C, Picard N, Sparrow B, Abraham E M, Aloui K, Atesoglu A, Attore F, Bassüllü Ç, Bey A, Garzuglia M, García-Montero L G, Groot N, Guerin G, Laestadius L, Lowe A J, Mamane B, Marchi G, Patterson P, Rezende M, Ricci S, Salcedo I, A. Diaz A S P, Stolle F, Surappaeva V and Castro R (2017). The extent of forest in dryland biomes. *Science* 356:635–638. doi.org/10.1126/science.aam6527
- Battaglia M, Bruce J, Brack C and Baker T (2009). *Climate Change and Australia's plantation estate: Analysis of vulnerability and preliminary investigation of adaptation options*. Project No: PNC068-0708. Forest and Wood Products Australia, Melbourne, Australia, pp.125.
- Bayne K and Page I (2009). *New Applications of Timber in Non-traditional Market Segments: High Rise Residential and Non-residential (Commercial) Buildings*. FWP Project Report PRA013–0708, Forest and Wood Products Australia, Melbourne.
- Beenken L (2017). *Austropuccinia*: a new genus name for the myrtle rust *Puccinia psidii* placed within the redefined family Sphaerophragmiaceae (Pucciniales). *Phytotaxa* 297:53–61.
- Bell T, Nyman P, Possell M, Sheridan G, Turnbull T, Volkova L and Weston C (2014). *Fire in the Landscape*. Final Project Report, Bushfire CRC (Cooperative Research Centre), Australia.
- Benyon RG and Doody TM (2014). Comparison of interception, forest floor evaporation and transpiration in *Pinus radiata* and *Eucalyptus globulus* plantations. *Hydrological Processes* 29:1173–1187.
- Benyon RG and Lane PNJ (2013). Ground and satellite-based assessments of wet eucalypt forest survival and regeneration for predicting long-term hydrological responses to a large wildfire. *Forest Ecology and Management* 294:197–207.
- Berthon K, Carnegie A, Esperon-Rodriguez M, Beaumont L and Leishman M (2018). Assessment and prioritisation of plant species at risk from myrtle rust (*Austropuccinia psidii*) under current and future climates in Australia. *Biological Conservation* 218:154–162.
- Binks B, Schirmer J and Kancans R (2014). *Regional socio-economic profiling of the forestry industry – Recommendations report*. ABARES, Canberra.
- Biodiversity Working Group (2016). *Report on the Review of the first five years of Australia's Biodiversity Conservation Strategy 2010–2030*. Commonwealth of Australia. www.environment.gov.au/system/files/resources/fee27a4f-8a96-430d-ad18-9ee8569c8047/files/bio-cons-strategy-review-report.pdf
- Bird J (2010). *New and Emerging Industries: National Research, Development and Extension Strategy*. RIRDC publication no. 10/159, Rural Industries Research and Development Corporation, Canberra. www.agrifutures.com.au/product/new-and-emerging-industries-rd-ande-strategies/
- Blay J and Eden Local Aboriginal Land Council (2011). *Report on a Survey of The Bundian Way 2010–2011*. www.bundianway.com.au/Bundian_Survey_Public.pdf
- Blue Environment (2016). *Australian National Waste Report 2016*. Department of the Environment and Energy and Blue Environment Pty Ltd, Docklands, Victoria. www.environment.gov.au/system/files/resources/d075c9bc-45b3-4ac0-a8f2-6494c7d1fa0d/files/national-waste-report-2016.pdf
- Bowman DMJS, Williamson GJ, Keenan RJ and Prior LD (2014). A warmer world will reduce tree growth in evergreen broadleaf forests: evidence from Australian temperate and subtropical eucalypt forests. *Global Ecology and Biogeography* 23:925–934.
- Bradshaw CJA (2012). Little left to lose: deforestation and forest degradation in Australia since European colonization. *Journal of Plant Ecology* 5:109–120.
- Brand JC, Cherikoff V and Lee A (1982). An Outstanding Food Source of Vitamin C. *Lancet* 320:873.
- Bren L (2009). *Native forest management in silvicultural systems and impacts on catchment water yields. Part 2. A critique of the ACF document 'WoodChipping our water'*. MDBA Publication 132/11, Murray–Darling Basin Authority, Canberra.
- Bren L (2015). *Forest hydrology and catchment management: an Australian perspective*. Springer Netherlands, 268 pp.
- Bren L, Jeyasingham J and Davey S (2013). Impacts of native forest harvesting on flows into the Murray–Darling Basin system. *Australian Forestry* 76:91–100.
- Broadhurst L, Breed M, Lowe A, Bragg J, Catullo R, Coates D, Encinas-Viso F, Gellie N, James E, Krauss S, Potts B, Rossetto M, Shepherd M and Byrne M (2017). Genetic diversity and structure of the Australian flora. *Diversity and Distributions* 23:41–52. doi.org/10.1111/ddi.12505
- Brown PB (1989). *The Swift Parrot Lathamus discolor (White): a report on its ecology, distribution and status, including management considerations*. Prepared for the Australian Heritage Commission. Department of Lands, Parks and Wildlife, Hobart.
- Bureau of Meteorology (2014). *Annual Climate Report 2013*. Bureau of Meteorology, Melbourne, 36 pp.
- Burgman M and Robinson AP (2012). *Review of Tasmanian Forest Estate Wood Supply Scenarios. Final Report to the Independent Verification Group, Intergovernmental Agreement*. Version 9.9, March 7, 2012. www.environment.gov.au/system/files/resources/eeefe0e6-0f83-486d-b0c3-8b1d25abc497/files/ivgwoodsupplyburgman.pdf
- Burns E and Lindenmayer D (2014). *Policy handbook: learning from long-term research to better manage biodiversity in Australia*. CSIRO publishing, Collingwood, Melbourne. openresearch-repository.anu.edu.au/bitstream/1885/130884/1/Policy%20Handbook_WEB_FINAL.pdf

- Burns K, Gupta M, Davey S, Frakes I, Gavran M and Hug B (2015). *Outlook scenarios for Australia's forestry sector: key drivers and opportunities*. ABARES report to client prepared for the Department of Agriculture, ABARES, Canberra.
- Burrows N, Dell B, Neyland M and Ruprecht J (2011). *Review of Silviculture in Forests of South-west Western Australia*. Report to Department of Environment and Conservation, Conservation Commission of Western Australia, Perth.
- Bush D, England N and Broadhurst L (2016). *Genetic diversity, conservation and breeding of Eucalyptus benthamii*. In: Forest Genetics for productivity conference: the next generation. Rotorua, New Zealand, 14–18 March 2016. Scion and IUFRO.
- Business Queensland (2016). *Plantation forests on state land*. Business Queensland, Brisbane. www.business.qld.gov.au/industries/farms-fishing-forestry/forests-wood/softwood-plantation
- Butcher PA, Skinner AK and Gardiner CA (2005). Increased inbreeding and inter-species gene flow in remnant populations of the rare *Eucalyptus benthamii*. *Conservation Genetics* 6:213–226.
- Byrne M, Prober S, McLean E, Steane D, Stock W, Potts B and Vaillancourt R (2013). *Adaptation to Climate in Widespread Eucalypt Species*. National Climate Change Adaptation Research Facility, Gold Coast.
- Caccamo G, Iqbal IA, Osborn J, Bi H, Arkley K, Melville G, Aurik D and Stone C (2018). Comparing yield estimates derived from LiDAR and aerial photogrammetric point cloud data with harvester head data in a *Pinus radiata* plantation in Tasmania (Australia). *Australian Forestry* 81:131–141. doi.org/10.1080/00049158.2018.1458582
- CALM (Department of Conservation and Land Management) (1994). *Forest Management Plan 1994–2003*. CALM, Perth.
- Cameron D (2001). *A vanishing presence: Queensland forest heritage*. In: Dargavel J, Hart D and Libbis B (eds) *Perfumed pineries: environmental history of Australia's Callitris forests*, pp.159–166. Centre for Resource and Environmental Studies, Australian National University, Canberra.
- Campbell CD, Sarre SD, Stojanovic D, Gruber B, Medlock K, Harris S, MacDonald AJ and Holleley CE (2018). When is a native species invasive? Inursion of a novel predatory marsupial detected using molecular and historical data. *Diversity and Distribution* 24:831–840. doi.org/10.1111/ddi.12717
- Carnegie AJ (2015). First Report of *Puccinia psidii* (Myrtle Rust) in *Eucalyptus* Plantations in Australia. *Plant Disease* 99:161.
- Carnegie AJ and Lidbetter JR (2012). Rapidly expanding host range for *Puccinia psidii* sensu lato in Australia. *Australasian Plant Pathology* 41:13–29.
- Carnegie AJ, Kathuria A, Pegg GS, Entwistle P, Nagel M and Giblin FR (2016). Impact of the invasive rust *Puccinia psidii* (myrtle rust) on native Myrtaceae in natural ecosystems in Australia. *Biological Invasions* 18:127–144.
- Carnegie AJ, Lidbetter JR, Walker J, Horwood MA, Tesoriero L, Glen M and Priest MJ (2010). *Uredo rangellii*, a taxon in the guava rust complex, newly recorded on Myrtaceae in Australia. *Australasian Plant Pathology* 39:463–466.
- Carrillo I, Vidal C, Elissetche JP and Mendonça RT (2017). Wood anatomical and chemical properties related to the pulpability of *Eucalyptus globulus*: a review. *Southern Forests* 80:1–8. doi.org/10.2989/20702620.2016.1274859
- Cawson JG, Sheridan GJ, Smith HG and Lane PNJ (2012). Surface runoff and erosion after prescribed burning and the effect of different fire regimes in forests and shrublands: a review. *International Journal of Wildland Fire* 21:857–872.
- CCWA (Conservation Commission of Western Australia) (2004). *Forest Management Plan 2004–2013*. CCWA, Perth.
- CCWA (Conservation Commission of Western Australia) (2012). *Forest Management Plan 2004–2013 End-of-term Audit of Performance Report*. CCWA, Perth. www.dpaw.wa.gov.au/images/documents/conservation-management/forests/FMP/preparing_FMP_2014-23/20120329_forest_management_plan_20042013_end_of_term_audit_performance_final_30_march_2012_ccwa.pdf
- CCWA (Conservation Commission of Western Australia) (2013). *Forest Management Plan 2014–2023*. CCWA, Perth. www.dpaw.wa.gov.au/images/documents/conservation-management/forests/FMP/20130282_WEB_FOREST_MGT_PLAN_WEB.pdf
- CEFC (Clean Energy Finance Corporation) (2017a). *CEFC, About us, How we operate*. www.cefc.com.au/about-us/how-we-operate.aspx
- CEFC (Clean Energy Finance Corporation) (2017b). *Fact sheet: CEFC commitment to landmark Australian Bioenergy Fund*, CEFC. www.cefc.com.au/media/158193/cefc-factsheet_australian-bioenergy-fund_lr.pdf
- Central Land Council (2007). *The Land Rights Act + Changes Made Simple*. Central Land Council, Alice Springs. www.clc.org.au/files/pdf/alra.pdf
- CER (Clean Energy Regulator) (2017a). *Emissions Reduction Fund (About the ERF; Choosing a project type)*. www.cleanenergyregulator.gov.au/ERF
- CER (Clean Energy Regulator) (2017b). *Emissions Reduction Fund Update: New plantation forestry method now available*. www.cleanenergyregulator.gov.au/ERF/Pages/News%20and%20updates/News-item.aspx?ListId=19b4efbb-6f5d-4637-94c4-121c1f96fcfe&ItemId=404
- CFANT (Crocodile Farmers Association of the Northern Territory and the Northern Territory Government) (2015). *Northern Territory crocodile farming industry strategic plan 2015–21*. CFANT, Berrimah, Northern Territory.
- Chapman AD (2009). *Numbers of Living Species in Australia and the World*, 2nd edition. Report for the Australian Biological Resources Study, Australian Government Department of the Environment, Water, Heritage and the Arts, Canberra.
- Clarke M (2012). *Australian native food industry stocktake*. RIRDC publication no. 12/066, Rural Industries Research and Development Corporation, Canberra. www.agrifutures.com.au/product/australian-native-food-industry-stocktake/
- Clode D and Burgman M (1996). *Joint Old-growth Forests Project: Summary Report*. NSW National Parks and Wildlife Service and State Forests of NSW, Sydney.
- COAG Standing Council on Environment and Water (2012). *Australia's Native Vegetation Framework*. Australian Government Department of Sustainability, Environment, Water, Population and Communities, Canberra.
- Commonwealth of Australia (1992). *National Forest Policy Statement: A New Focus for Australia's Forests*. 2nd edition, Commonwealth of Australia, Canberra.
- Commonwealth of Australia (2008). *Australia's Sustainable Forest Management Framework of Criteria and Indicators 2008: Policy Guidelines*, Commonwealth of Australia, Canberra. www.agriculture.gov.au/abares/forestsaustralia/Documents/ciframework.pdf
- Commonwealth of Australia (2012). *Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses*. Department of Sustainability, Environment, Water, Populations and Communities. Australian Government, Canberra, 17 pp.

- Commonwealth of Australia (2013a). *Approved Conservation Advice for the Brigalow (Acacia harpophylla dominant and co-dominant) ecological community*. Approved by the Delegate of the Minister on 17 December 2013. www.environment.gov.au/biodiversity/threatened/communities/pubs/028-conservation-advice.pdf
- Commonwealth of Australia (2013b). *Tasmanian Wilderness World Heritage Area (Australia) Proposal for a Minor Boundary Modification*. Canberra. www.environment.gov.au/system/files/pages/f99dbb51-03c2-4eb2-a66e-87c4044117b4/files/twwha-dossier.pdf
- Commonwealth of Australia (2014). *The National Soil Research, Development and Extension Strategy, Securing Australia's Soil for profitable industries and healthy landscapes*. Commonwealth of Australia, Canberra. www.agriculture.gov.au/Style%20Library/Images/DAFF/_data/assets/pdffile/0012/2379585/soil.pdf
- Commonwealth of Australia (2015). *Meeting future market demand. Australia's forest products and forest industry – A strategic directions issues paper*. Forest Industry Advisory Council, Department of Agriculture, Canberra.
- Commonwealth of Australia (2016a). *Conservation Advice: Lathamus discolor (swift parrot)*. Department of the Environment, Canberra. www.environment.gov.au/biodiversity/threatened/species/pubs/744-conservation-advice-05052016.pdf
- Commonwealth of Australia (2016b). *Transforming Australia's forest products industry: recommendations from the Forest Industry Advisory Council*. Forest Industry Advisory Council, Department of Agriculture and Water Resources, Canberra. www.agriculture.gov.au/forestry/industries/fiac/transforming-australias-forest-industry
- Commonwealth of Australia (2018). *Closing the gap: Prime Minister's report 2018*. Department of the Prime Minister and Cabinet, Canberra, 132 pp.
- Connolly E and Orsmond D (2011). *The mining industry: from bust to boom*. Paper presented to 'The Australian Economy in the 2000s conference'. Sydney, 15–16 August 2011.
- Corey B and Radford IJ (2017). *North-Kimberley Landscape Conservation Initiative: 2015–16 Monitoring, Evaluation, Research & Improvement Report*. WA Department of Parks and Wildlife, Kununurra, Western Australia. www.dpaw.wa.gov.au/images/documents/conservation-management/kimberley/2015-16_lci_merit_report.pdf
- Costello G, Gregory M and Donatiu P (2009). *Southern Macadamia Species Recovery Plan*. Report to Department of the Environment, Water, Heritage and the Arts, Canberra by Horticulture Australia Limited, Sydney. www.environment.gov.au/biodiversity/threatened/recovery-plans/southern-macadamia-species-recovery-plan
- Council of Heads of Australian Botanic Gardens (2008). *National Strategy and Action Plan for the Role of Australia's Botanic Gardens in Adapting to Climate Change*. Commonwealth of Australia and Council of Heads of Australian Botanic Gardens, Canberra. www.anbg.gov.au/chabg/climate-change/botclimate.pdf
- CSIRO and Bureau of Meteorology (2015). *Climate Change in Australia. Projections for NRM Regions*. Technical Report. CSIRO, 222 pp.
- DAA (2016). *Department of Aboriginal Affairs 2015–16 annual report*. Department of Aboriginal Affairs, Western Australia.
- DAF (Queensland Department of Agriculture and Fisheries) (2016). *Annual Report 2015–16*. DAF, Brisbane. www.daf.qld.gov.au/data/assets/pdf_file/0007/673504/DAF-annual-report-201516.pdf
- DAF (Queensland Department of Agriculture and Fisheries) (2017a). *Assessment of the barramundi (Lates calcarifer) fishery in the Southern Gulf of Carpentaria, Queensland, Australia*. DAF, Brisbane. era.daf.qld.gov.au/id/eprint/5794/1/Assessment%20of%20the%20SGoC%20Barramundi%20fishery%20in%20Queensland.pdf
- DAF (Queensland Department of Agriculture and Fisheries) (2017b). *Queensland Fisheries Summary Report – Mud Crab Fishery*.
- Dare M and Eversole R (2013). *Forest owner intent: Harvesting Tasmania's non-industrial private forests – The intent of Tasmania's private forest growers to harvest their forest estate*. Report prepared for Private Forests Tasmania, Institute for Regional Development, Private Forests Tasmania, Hobart. www.pft.tas.gov.au/_data/assets/pdf_file/0006/131946/FOIS-2012_Report_FINAL_MARCH2013.pdf
- Davey S and Dunn G (2014). *Australian native forest commerciality*. ABARES Technical Report 14.3, Canberra.
- Davey SM (2018a). Regional forest agreements: origins, development and contributions. *Australian Forestry* 81:64–88. doi.org/10.1080/00049158.2018.1458701
- Davey SM (2018b). Reporting Australia's forest biodiversity I: forest-dwelling and forest-dependent native species. *Australian Forestry* 81:196–209. doi.org/10.1080/00049158.2018.1509683
- Davey SM (2018c). Reporting Australia's forest biodiversity II: threatened forest-dwelling and forest-dependent species. *Australian Forestry* 81:214–230. doi.org/10.1080/00049158.2018.1510627
- Davidson J, Davey S, Singh S, Parsons M, Stokes B and Gerrand A (2008). *The Changing Face of Australia's Forests*. Bureau of Rural Sciences, Canberra.
- Davies PE, Cook LJ, Mallick SA and Munks SA (2016). Relating upstream forest management to stream ecosystem condition in middle catchment reaches in Tasmania. *Forest Ecology and Management* 362:142–155.
- Davis NE, Bennett A, Forsyth DM, Bowman DMJS, Lefroy EC, Wood SW, Woolnough AP, West P, Hampton JO and Johnson CN (2016). A systematic review of the impacts and management of introduced deer (family Cervidae) in Australia. *Wildlife Research* 43:515–532. www.publish.csiro.au/wr/pdf/WR16148
- DCCEE (Australian Government Department of Climate Change and Energy Efficiency) (2012). *National Inventory Report 2010, vol. 2*, DCCEE, Canberra.
- DEC (Department of Environment and Conservation) (2008). *Code of Practice for Fire Management 2008*. DEC, Perth.
- DEC (Department of Environment and Conservation) (2009a). *Guidelines for Protection of the Values of Informal Reserves and Fauna Habitat Zones*. Sustainable Forest Management Guideline No. 4. DEC, Perth. library.dbca.wa.gov.au/static/FullTextFiles/069674.pdf
- DEC (Department of Environment and Conservation) (2009b). *Phytophthora dieback – detecting the pathogen*. Science Division Information Sheet 8/2009. DEC, Western Australia.
- DEC (Department of Environment and Conservation) (2009c). *Soil and Water Conservation Guidelines 2009*. Sustainable Forest Management Guideline No. 5. DEC, Perth.

- DEC (Department of Environment and Conservation) (2012a). *Department of Environment and Conservation 2011–12 Annual Report*. DEC, Perth. www.dpaw.wa.gov.au/images/documents/about/annual-report/older/_anrep_11-12_full.pdf
- DEC (Department of Environment and Conservation) (2012b). *Sustained yield information sheet series*. DEC, Perth. www.dpaw.wa.gov.au/images/documents/conservation-management/forests/FMP/preparing_FMP_2014-23/sustained_yield_information_sheets.pdf
- DEC (Department of Environment and Conservation) (2013a). *Department of Environment and Conservation 2012–13 Annual Report*. DEC, Perth. www.dpaw.wa.gov.au/images/documents/about/annual-report/2013/20130151_Annual_Report_WEB.pdf
- DEC (Department of Environment and Conservation) (2013b). *Management of Commercial Harvesting of Protected Flora in Western Australia 1 July 2013 – 30 June 2018*. DEC, Perth. www.environment.gov.au/resource/management-commercial-harvesting-protected-flora-western-australia-1-july-2013-30-june-2018
- DEHP (Queensland Department of Environment and Heritage Protection) (2017). *Field guide for managing fire in northern bettong habitat*. DEHP, Brisbane. www.ehp.qld.gov.au/wildlife/threatened-species/documents/field-guide-managing-fire-northern-bettong-habitat.pdf
- DELWP (Department of Environment, Land, Water and Planning) (2015). *Annual Report 2014–15*. DELWP, East Melbourne. www2.delwp.vic.gov.au/_data/assets/pdf_file/0027/83097/Annual-Report-2014-15.pdf
- DELWP (Department of Environment, Land, Water and Planning) (2016). *Annual Report 2015–16*. DELWP, East Melbourne. www2.delwp.vic.gov.au/_data/assets/pdf_file/0029/83099/Annual-Report-2015-16.pdf
- DEPI (Department of Environment and Primary Industries) (2013). *An overview of the Victorian waterway management strategy*. DEPI, Victoria, East Melbourne. www.water.vic.gov.au/_data/assets/pdf_file/0019/52543/VWMS-Summary_FINAL_WEB-ready.pdf
- DEPI (Department of Environment and Primary Industries) (2014a). *Annual Report 2013–14*. DEPI, East Melbourne. vpls.sdp.sirsidynix.net.au/client/search/asset/1270832
- DEPI (Department of Environment and Primary Industries) (2014b). *Code of Practice for Timber Production 2014*. Department of Environment and Primary Industries, Victoria.
- DEPI (Department of Environment and Primary Industries) (2014c). *Management Standards and Procedures for Timber Harvesting Operations in Victoria's State Forests 2014*. DEPI, Victoria, East Melbourne.
- DEPI (Department of Environment and Primary Industries) (2014d). *Victoria's State of the Forests Report 2013*. www.forestsandreserves.vic.gov.au/forest-management/state-of-the-forests-report
- DERM (Queensland Department of Environment and Resource Management) (2008). *Leasing Aboriginal Deed of Grant in Trust Land in Local Government Areas – Private Residential Purposes, a Manual for Trustees*. DERM, Brisbane.
- DFAT (Department of Foreign Affairs and Trade) (2017a). *Japan–Australia Economic Partnership Agreement – Fact Sheet: Resources, Energy and Manufacturing*. dfat.gov.au/trade/agreements/in-force/jaepa/fact-sheets/Documents/jaepa-fact-sheet-resources-energy-and-manufacturing.pdf
- DFAT (Department of Foreign Affairs and Trade) (2017b). *China–Australia Free Trade Agreement – Fact Sheet: Resources, Energy and Manufacturing*. dfat.gov.au/trade/agreements/in-force/chafta/fact-sheets/Documents/chafta-fact-sheet-resources-energy-and-manufacturing.pdf
- DIA (Western Australian Department of Indigenous Affairs) (2005). *Overcoming Indigenous Disadvantage in Western Australia Report 2005*. DIA, Perth.
- Dillon R, Jeyasingham J, Eades S and Read S (2015). *Development of the Australia's Indigenous forest estate (2013) dataset*. ABARES Research report 15.6, Canberra.
- DIRDC (Department of Infrastructure, Regional Development and Cities) (2015). *Coalition Government's \$100M-plus Commitment to Tasmania*. minister.infrastructure.gov.au/wh/releases/2013/October/wh011_2013.aspx
- DLRM (Northern Territory Department of Land Resource Management) (2015). *Wildlife Trade Management Plan for the Saltwater Crocodile (Crocodylus porosus) in the Northern Territory of Australia, 2016–2020*. Department of Land Resource Management, Palmerston, Northern Territory.
- DNPRSR (Queensland Department of National Parks, Recreation, Sport and Racing) (2014). *Code of Practice for Native Forest Timber Production on the QPWS Forest Estate 2014*. Queensland Parks and Wildlife Service, the Department of National Parks, Recreation, Sport and Racing, Brisbane. www.npsr.qld.gov.au/managing/pdf/timber-production-qpws-estate.pdf
- DNRM (Department of Natural Resources and Mines) (2014). *Managing a native forest practice – A self-assessable vegetation clearing code*. DNRM, Queensland, Brisbane.
- DoE (Department of the Environment) (2015). *National Inventory Report 2013*. Canberra.
- DoEE (Department of the Environment and Energy) (2015). *Review of the national recovery plan for the Tasmanian Giant Freshwater Lobster (Astacopsis gouldi)*. DoEE, Canberra. www.environment.gov.au/system/files/resources/005e8904-6602-4de1-b32f-64a58af3a63f/files/review-recovery-plan-giant-freshwater-lobster.pdf
- DoEE (Department of the Environment and Energy) (2016a). *Australia State of the Environment*. DoEE, Canberra.
- DoEE (Department of the Environment and Energy) (2016b). *Kakadu Management Plan 2016–2026*. DoEE, Canberra.
- DoEE (Department of the Environment and Energy) (2017a). *About the Carbon Farming Initiative*. www.environment.gov.au/climate-change/government/emissions-reduction-fund/about
- DoEE (Department of the Environment and Energy) (2017b). *Australian Energy Update 2017*. DoEE, Canberra. www.energy.gov.au/publications/australian-energy-update-2017
- DoEE (Department of the Environment and Energy) (2017c). *Emissions Reduction Fund*. www.environment.gov.au/climate-change/emissions-reduction-fund
- DoEE (Department of the Environment and Energy) (2017d). *National Inventory Report 2015. Volume 2*. DoEE, Canberra.
- DoEE (Department of the Environment and Energy) (2018a). *National Inventory Report 2016. Volume 2*. Commonwealth of Australia, Canberra. www.environment.gov.au/climate-change/climate-science-data/greenhouse-gas-measurement/publications/national-inventory-report-2016
- DoEE (Department of the Environment and Energy) (2018b). *National Inventory Report 2016. Volume 3*. DoEE, Canberra.

- DoEE (Department of the Environment and Energy) (2018c). *West Kimberley Place Report*. DoEE, Canberra. www.environment.gov.au/system/files/pages/ed0b4e39-41eb-4cee-84f6-049a932c5d46/files/ahc-final-assessment-full.pdf
- Doley D (2010). The response of forests to climate change: the role of silviculture in conserving threatened species. *Australian Forestry* 73:115–125. doi.org/10.1080/00049158.2010.10676317
- Doran J, Bush D and Davis R (2016). *Breeding to improve foliar oil yields in Eucalyptus polybractea*. In: Forest Genetics for productivity conference: the next generation. Conference held at Rotorua, New Zealand, 14–18 March 2016. Scion and IUFRO.
- Downham R and Gavran M (2017). *Australian plantation statistics 2017 update*. ABARES, Canberra.
- Downham R and Gavran M (2018). *Australian plantation statistics 2018 update*. ABARES, Canberra.
- DPaW (Department of Parks and Wildlife) (2009a). *Soil and Water Conservation Guideline 2009*. DPaW, Perth.
- DPaW (Department of Parks and Wildlife) (2009b). *Manual for the Management of Surface Water 2009*. DPaW, Perth.
- DPaW (Department of Parks and Wildlife) (2010). *Manual of Procedures for the Management of Soils Associated with Timber Harvesting in Native Forests 2010*. DPaW, Perth.
- DPaW (Department of Parks and Wildlife) (2014). *Department of Parks and Wildlife 2013–14 Annual Report*. DPaW, Perth. www.dpaw.wa.gov.au/images/documents/about/annual-report/2014/DPaW_Annual_Report_FULL_WEB_.pdf
- DPaW (Department of Parks and Wildlife) (2015a). *Department of Parks and Wildlife 2014–15 Annual Report*. DPaW, Perth. www.dpaw.wa.gov.au/images/documents/about/annual-report/2015/ParksandWildlife_AnnualReport2014-15_Full.pdf
- DPaW (Department of Parks and Wildlife) (2015b). *Review of the Sandalwood (Limitation of Removal of Sandalwood) Order 1996*. DPaW, Perth. www.dpaw.wa.gov.au/images/documents/plants-animals/licences-permits/Flora/sandalwood_oic_review_report_may_2015.pdf
- DPaW (Department of Parks and Wildlife) (2016a). *A report on progress with the implementation of the Regional Forest Agreement for the South-West Forest Region of Western Australia Period 3: 2009 to 2014*. Department of Parks and Wildlife, Perth, and Department of Agriculture and Water Resources, Commonwealth.
- DPaW (Department of Parks and Wildlife) (2016b). *Department of Parks and Wildlife 2015–16 Annual Report*. DPaW, Perth. www.dpaw.wa.gov.au/images/documents/about/annual-report/2016/parks_and_wildlife_annual_report_1516_finalweb.pdf
- DPaW (Department of Parks and Wildlife) (2016c). *Department of Parks and Wildlife Western Australia 2015–16 Yearbook*. DPaW, Perth. www.dpaw.wa.gov.au/about-us/annual-report-and-yearbook
- DPIPWE (Department of Primary Industries, Parks, Water and Environment) (2012). *Code of practice for the field shooting of brushtail possums in Tasmania*. DPIPWE, Hobart. dipwe.tas.gov.au/Documents/Possum-Code-of-Practice-Aug-2012.pdf
- DPIPWE (Department of Primary Industries, Parks, Water and Environment) (2015a). *Annual state-wide spotlight surveys Tasmania 2015, regional summary: priority harvested species*. DPIPWE, Hobart. See for example dipwe.tas.gov.au/Documents/Spotlight%20Summary%20Report.pdf
- DPIPWE (Department of Primary Industries, Parks, Water and Environment) (2015b). *Management Plan for the Commercial Harvest and Export of Brushtail Possums in Tasmania 1st July 2015 – 1st July 2020*. DPIPWE, Hobart. www.environment.gov.au/system/files/resources/98744979-0ea9-4d19-b35a-be3421f0c559/files/tas-brushtail-possums-management-plan-2015-2020.pdf
- DPIPWE (Department of Primary Industries, Parks, Water and Environment) (2016). *Annual Report 2016*. DPIPWE, Hobart.
- DPIR (Department of Primary Industry and Resources, Northern Territory) (2017). *Management Framework for the Northern Territory Mud Crab Fishery*. DPIR, Darwin. dpir.nt.gov.au/data/assets/pdf_file/0007/448243/mud-crab-fishery-mgt-framework-2017.pdf
- DRPI (Department of Resources – Primary Industries) (2004). *Northern Territory Codes of Practice for Forestry Plantations*. Available in *Assessment of Code of Practice for Plantation Forestry: Northern Territory, Appendix F*. CSIRO (2012). www.agriculture.gov.au/SiteCollectionDocuments/forestry/australias-forest-policies/plant-code/plant-code-nt.pdf
- DSDBI (Department of State Development, Business and Innovation) (2014). *Department of State Development, Business and Innovation Annual Report 2013–14*. web.archive.org/web/20150301094836/http://dsdbi.vic.gov.au/data/assets/pdf_file/0018/1006353/DSDBI-ANNUAL-REPORT-2013-14-FINAL_web.pdf
- DSE (Victorian Department of Sustainability and Environment) (2003). *Victoria's State of the Forests Report 2003*. DSE, Melbourne.
- DSE (Victorian Department of Sustainability and Environment) (2008). *Victoria's State of the Forests Report 2008*. DSE, Melbourne.
- DSE (Victorian Department of Sustainability and Environment) (2012). *Code of Practice for Bushfire Management on Public Land*. DSE, Melbourne.
- DSEWPaC (Australian Government Department of Sustainability, Environment, Water, Population and Communities) (2011a). *Firewood*. Australian Government Web Archive, Canberra. webarchive.nla.gov.au/gov/20130329064028/http://www.environment.gov.au/land/pressures/firewood/index.html
- DSEWPaC (Australian Government Department of Sustainability, Environment, Water, Population and Communities) (2011b). *Commercial Kangaroo Harvesting*. Fact sheet, DSEWPaC, Canberra. www.environment.gov.au/biodiversity/wildlife-trade/publications/commercial-kangaroo-harvesting-fact-sheet-2011
- DSG (Tasmanian Department of State Growth) (2017). *The Tasmanian Special Species Management Plan*. Department of State Growth, Hobart. www.stategrowth.tas.gov.au/data/assets/pdf_file/0013/160141/Tasmanian_Special_Species_Management_Plan_October_2017.pdf
- DSITI (Department of Science, Information Technology and Innovation) (2017). *Landcover change in Queensland 2015–16, Statewide landcover and trees report*. DSITI, Brisbane.
- Dudley N (2008). *Guidelines for Applying Protected Areas Management Categories*. International Union for Conservation of Nature, Gland, Switzerland.
- Dudley N and Phillips A (2006). *Forests and Protected Areas: Guidance on the Use of the IUCN Protected Area Management Categories*. Best Practice Protected Area Guidelines Series No.12, International Union for Conservation of Nature, Gland, Switzerland, and Cambridge, UK.

- Duff GA and Kile GA (2014). *Priorities, capability and potential models for RD&E for the forest and wood products in Australia – if the model is broken, what is the new model?* Discussion paper for the Forest and Wood Products Sector Forum.
- Duke NC, Kovacs JM, Griffiths AD, Preece L, Hill DJE, van Oosterzee P, Mackenzie J, Morning HS and Burrows D (2017). Large-scale dieback of mangroves in Australia. *Marine and Freshwater Research* 68:1816–1829.
- Edge Environment (2012). *Construction and Demolition Waste Guide – Recycling and Re-use Across the Supply Chain*. DSEWPac (Department of Sustainability, Environment, Water, Population and Communities), Canberra. www.environment.gov.au/protection/waste-resource-recovery/publications/construction-and-demolition-waste-guide
- Ellis S, Kanowski P and Whelan R (2004). *National Inquiry on Bushfire Mitigation and Management*. Commonwealth of Australia, Canberra. www.dfes.wa.gov.au/publications/GeneralReports/FESA_Report-NationalInquiryonBushfireMitigationandManagement.pdf
- Environment ACT (2005). *ACT Code of Forest Practice*. Environment ACT, Canberra.
- EPA (New South Wales Environment Protection Authority) (2013a). *The Private Native Forestry Code Outcomes Monitoring Project*. A report prepared by Paul Killey, NSW Environment Protection Authority, Sydney.
- EPA (New South Wales Environment Protection Authority) (2013b). *Private Native Forestry Code of Practice for Northern NSW*. New South Wales Environment Protection Authority, Sydney. www.lls.nsw.gov.au/sustainable-land-management/pnforestry/private-native-forestry-code-of-practice
- EPA (New South Wales Environment Protection Authority) (2016). *Native Forestry Environmental Compliance Priorities 2015–16*. State of New South Wales and the Environment Protection Authority, Sydney. www.epa.nsw.gov.au/publications/forestagreements/160099-Forestry-ECP-2015-16.htm
- EPHC (Environment Protection and Heritage Council) (2010). *National Waste Report 2010*. EPHC, Canberra.
- ESA (Emergency Services Agency) (2014). *ACT Strategic Bushfire Management Plan 2014–2019*. Emergency Services Agency, ACT. esa.act.gov.au/wp-content/uploads/The-ACT-Strategic-Bushfire-Management-Plan.pdf
- FAA (Firewood Association of Australia) (2018). *Firewood Association of Australia Inc. – About the FAA*. www.firewood.asn.au/about/about-faa.html
- Fahrig L (2013). Rethinking patch size and isolation effects: the habitat amount hypothesis. *Journal of Biogeography* 40:1649–1663.
- FAO (Food and Agriculture Organization of the United Nations) (2014). *The State of the World's Forest Genetic Resources*. Commission on Genetic Resources for Food and Agriculture, Food and Agriculture Organization of the United Nations, Rome. www.fao.org/forestry/fgr/64582/en/
- FAO (Food and Agriculture Organization of the United Nations) (2015). *Global Forest Resources Assessment 2015*. FAO, Italy, Rome 2016. www.fao.org/3/a-i4793e.pdf
- FCNSW (Forestry Corporation of New South Wales) (2013a). *Forestry Corporation of NSW Annual Report 2012–13*. FCNSW, Pennant Hills.
- FCNSW (Forestry Corporation of New South Wales) (2013b). *Forestry Corporation of NSW Sustainability Supplement 2012–13*. FCNSW, Pennant Hills. www.forestrycorporation.com.au/data/assets/pdf_file/0010/499141/forests-nsw-sustainability-supplement-2012-13.pdf
- FCNSW (Forestry Corporation of New South Wales) (2014a). *Annual Report 2013–14*. FCNSW, Pennant Hills.
- FCNSW (Forestry Corporation of New South Wales) (2014b). *Sustainability Supplement 2013–14*. FCNSW, Pennant Hills. www.forestrycorporation.com.au/data/assets/pdf_file/0016/544120/forestry-corporation-of-nsw-sustainability-supplement-2013-14.pdf
- FCNSW (Forestry Corporation of New South Wales) (2015). *Sustainability Supplement 2014–15*. FCNSW, Pennant Hills. www.forestrycorporation.com.au/data/assets/pdf_file/0003/590340/FCNSW0281-SustainabilitySupp_FY15010216.pdf
- FCNSW (Forestry Corporation of New South Wales) (2016a). *Annual report 2015–16*. FCNSW, Pennant Hills. www.forestrycorporation.com.au/data/assets/pdf_file/0008/686348/2015-16-annual-report.pdf
- FCNSW (Forestry Corporation of New South Wales) (2016b). *Forest Management Plan for the Coastal Forests of NSW*. FCNSW, Sydney. www.forestrycorporation.com.au/data/assets/pdf_file/0011/669008/hardwood-forests-forest-management-plan.pdf
- FCNSW (Forestry Corporation of New South Wales) (2016c). *Telling the story of Gumgali*. Fact sheet, FCNSW, Pennant Hills.
- FCNSW (Forestry Corporation of New South Wales) (2016d). *Sustainability Snapshot 2015–16*. FCNSW, Pennant Hills. www.forestrycorporation.com.au/data/assets/pdf_file/0017/692000/SustainabilitySnapshot2015-16.pdf
- FCNSW (Forestry Corporation of New South Wales) (2017). *Aboriginal partnerships*. FCNSW, Pennant Hills. www.forestrycorporation.com.au/management/aboriginal-partnerships
- Feary S (2007). *Chainsaw Dreaming: Indigenous Australians and the forest sector*. Australian National University, Canberra.
- Feary S (2008). Social Justice in the Forest: Aboriginal engagement with Australia's forest industries. *Transforming Cultures eJournal* 3:265–290.
- Feary S (2018). *Indigenous Australians and fire in south-eastern Australia*. In: Perspectives of Prescribed Burning in Landscape Management (Thornton R, Wouters M, Leavesley A, eds). Australasian Fire Authorities and Emergency Services Council, Melbourne, in press.
- Feary S, Kanowski P, Altman J and Baker R (2010). Managing forest country: Aboriginal Australians and the forest sector. *Australian Forestry* 73:126–134.
- Feikema PM, Sherwin CB and Lane PNJ (2013). Influence of climate, fire severity and forest mortality on predictions of long term streamflow: Potential effect of the 2009 wildfire on Melbourne's water supply catchments. *Journal of Hydrology* 488:1–16.
- Ferguson I, Adams M, Bradshaw J, Davey S, McCormack R and Young J (2003). *Calculating Sustained Yield for the Forest Management Plan 2004–2013*. Stage 3 Report. Western Australian Conservation Commission, Perth.
- Ferguson I, Bull L and Gorrie G (2010). *Improving the investment climate for Australian forest industries*. In: Growing Green Assets: Removing Constraints to Private Sector Investment in Asia and the Pacific, Pescott M, Durst PB, Leslie RN (eds), Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, Bangkok.

- Ferguson I, Dell B and Vancly J (2013). *Calculating the sustained yield for the south-west native forests of Western Australia*. Report for the Conservation Commission and the Department of Environment and Conservation of WA by the Independent Expert Panel. Conservation Commission WA, Perth. www.dpaw.wa.gov.au/images/documents/conservation-management/forests/FMP/Sustained_Yield_Independent_Expert_Panel_Report_MARCH2013.pdf
- FFMG (Forest Fire Management Group) (2014). *National Bushfire Management Policy Statement for Forests and Rangelands*. Prepared by the Forest Fire Management Group for The Council of Australian Governments. www.sfmcc.tas.gov.au/sites/sfmcc.tas.gov.au/files/NationalBushfireManagementPolicy_2014.pdf and www.environment.nsw.gov.au/research-and-publications/publications-search/national-bushfire-management-policy-statement-for-forests-and-rangelands
- FIFWA (Forest Industries Federation of Western Australia) (2014). *Code of Practice for Timber Plantations in Western Australia*. FIFWA, Western Australia, Bentley.
- Florance D, Wood J and Lindenmayer D (2016). *Environmental Stewardship Box Gum Grassy Woodland Monitoring Project*. Annual Report for the Department of the Environment, Fenner School of Environment and Society, Australian National University, Canberra. www.nrm.gov.au/system/files/resources/fdc63b3f-291c-47c8-a805-cac6ceae4d36/files/ecologicalmonitoring-esp-report-2016.pdf
- Forest Practices Board (2002). *State of the Forests Report 2002*. Forest Practices Board, Hobart. www.fpa.tas.gov.au/FPA_publications/state_of_the_forests_tasmania_reports
- Forest Products Commission (2016). *Annual report 2015–2016*. Forest Products Commission of Western Australia, Perth.
- Forest Solutions (2013). *Review of Commercial Forestry Management in Western Victoria: Timber Resources, Harvest Levels, Silviculture, and Systems and Processes*. Report prepared for the Department of Environment and Primary Industries. Department of Environment and Primary Industries and Forest Solutions, Melbourne.
- Forestry SA (2012). *ForestrySA Annual Report 2011–12*. ForestrySA, Mount Gambier. www.forestrysa.com.au/app/uploads/2017/06/ForestrySA_Annual_Report_2011-12.pdf
- Forestry SA (2013). *ForestrySA Annual Report 2012–13*. ForestrySA, Mount Gambier. www.forestrysa.com.au/app/uploads/2017/06/ForestrySA_Annual_Report_2012-13.pdf
- Forestry SA (2014). *ForestrySA Annual Report 2013–14*. ForestrySA, Mount Gambier. www.forestrysa.com.au/app/uploads/2017/06/ForestrySA-Annual-Report-2013-14-FINAL-FOR-WEB.pdf
- Forestry SA (2015). *ForestrySA Annual Report 2014–15*. ForestrySA, Mount Gambier. www.forestrysa.com.au/app/uploads/2017/06/Annual-Report-2014-15_amended-version-6-October.pdf
- Forestry SA (2016). *ForestrySA Annual Report 2015–16*. ForestrySA, Mount Gambier. www.forestrysa.com.au/app/uploads/2017/06/ForestrySA-Annual-Report-2015-16-AMENDED-20-October-2016-with-rescanned-certificates-31-January-2017.pdf
- ForestrySA/PIRSA (Primary Industries and Regions South Australia) (2015). *Memorandum of administrative arrangement for the provision of community service obligations by ForestrySA, Annual Report 2014–2015*. ForestrySA/PIRSA. www.forestrysa.com.au/app/uploads/2017/06/FSA-PIRSA-MoAA-2014-15-Annual-Report.pdf
- Forestry Tasmania (2007). *Sustainable High Quality Eucalypt Sawlog Supply from Tasmanian State Forest – Review No 3*. Planning Branch, Forestry Tasmania, Hobart.
- Forestry Tasmania (2010). *Special Timbers Strategy*. Forestry Tasmania, Hobart.
- Forestry Tasmania (2012a). *Appendix 1: 2011–12 Financial Statements, 2011–12 Stewardship Report*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/financialstatements2012.pdf
- Forestry Tasmania (2012b). *2011–12 Stewardship Report*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/stewardshipreport2012.pdf
- Forestry Tasmania (2013a). *Appendix 1: 2012–13 Financial Statements, 2012–13 Stewardship Report*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/financialstatements2013.pdf
- Forestry Tasmania (2013b). *A Review of the Sustainable Sawlog Supply from the Blackwood Management Zone*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/reviewsustainableblackwoodsupply2013_0.pdf
- Forestry Tasmania (2013c). *2012–13 Stewardship Report*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/stewardshipreport2013.pdf
- Forestry Tasmania (2014a). *Appendix 1: 2013–14 Financial Statements, 2013–14 Stewardship Report*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/financialstatements2014.pdf
- Forestry Tasmania (2014b). *Sustainable High Quality Eucalypt Sawlog Supply from Tasmania's Permanent Timber Production Zone Land — Review No 4*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/sustainableyieldreport4270314_1.pdf
- Forestry Tasmania (2014c). *2013–14 Stewardship Report*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/stewardshipreport20141.pdf
- Forestry Tasmania (2015a). *Annual Report 2014/15: Proudly Growing Tasmanian Timber*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/annualreport2014152.pdf
- Forestry Tasmania (2015b). *Special Timbers Resource Assessment on Permanent Timber Production Zone Land*. A report to Department of State Growth and Ministerial Advisory Council Special Timbers Subcommittee, Forestry Tasmania, Hobart. www.stategrowth.tas.gov.au/data/assets/pdf_file/0006/132378/Special_Timbers_Resource_Assessment_on_PTPZL_Final_Sept.PDF
- Forestry Tasmania (2016a). *Annual Report 2015/16: Proudly Growing Tasmanian Timber*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/annual-reports/ftannualreport201516.pdf
- Forestry Tasmania (2016b). *Chemical use in forestry (Fact Sheet 8)*. Forestry Tasmania, Hobart. www.sttas.com.au/sites/default/files/media/documents/fact-sheet/8stt-fact-sheetchemical-use-forestry.pdf
- Forestry Tasmania (2017). *Special Timbers Resource Assessment on Permanent Timber Production Zone Land, Future Potential Production Forest Land, Regional Reserves and Conservation Areas*. A report to Department of State Growth and Ministerial Advisory Council Special Timbers Subcommittee, Forestry Tasmania, Hobart. www.stategrowth.tas.gov.au/data/assets/pdf_file/0015/152403/Special_Timbers_Resource_Assessment_on_PTPZ_FPPF_RR_CA_Final_2017.PDF

- Forests NSW (2005). *Forest Practices Code – Part 1, Timber Harvesting in NSW Plantations*. Forests NSW, Pennant Hills.
- Forests NSW (2010). *Forests NSW yield estimates for native forest regions*. Forests NSW, Pennant Hills. www.forestrycorporation.com.au/data/assets/pdf_file/0007/439414/Forests-NSW-yield-estimates-for-native-forest-regions.pdf
- ForestWorks (2016). *Industry Skills Scan 2015*. ForestWorks, Melbourne.
- ForestWorks (2018). *Skill Standards and Qualifications*. forestworks.com.au/services/skills-standards-and-qualifications/
- Forwood (1975). *Report on the forestry and wood-based industries development conference 1974*. Australian Forestry Council, Canberra.
- Foster M (2014). *Emerging Industries: Their Value to Australia*. Rural Industries Research and Development Corporation, Canberra. www.agrifutures.com.au/product/emerging-animal-and-plant-industries-their-value-to-australia/
- FPA (Forest Practices Authority) (2007). *State of the forests Tasmania 2006*. FPA, Hobart. www.fpa.tas.gov.au/FPA_publications/state_of_the_forests_tasmania_reports
- FPA (Forest Practices Authority) (2011a). *Guidelines for the Protection of Class 4 Streams*. FPA, Hobart.
- FPA (Forest Practices Authority) (2011b). *Management of gene flow from plantation eucalypts*. Flora Technical Note No. 12, FPA, Hobart.
- FPA (Forest Practices Authority) (2012). *State of the forests Tasmania 2012*. FPA, Hobart. www.fpa.tas.gov.au/FPA_publications/state_of_the_forests_tasmania_reports
- FPA (Forest Practice Authority) (2014). *Monitoring the effectiveness of the biodiversity provisions of the Tasmanian Forest Practices Code*. FPA, Hobart. www.fpa.tas.gov.au/research_and_monitoring
- FPA (Forest Practice Authority) (2015a). *Monitoring the effectiveness of the biodiversity provisions of the Tasmanian Forest Practices Code*. FPA, Hobart. www.fpa.tas.gov.au/research_and_monitoring
- FPA (Forest Practices Authority) (2015b). *The Forest Practices Code 2015*. FPA, Hobart. www.fpa.tas.gov.au/fpa_services/planning_assistance/forest_practices_code
- FPA (Forest Practices Authority) (2016a). *Forest Practices Authority Annual Report 2015–16*. FPA, Hobart. www.fpa.tas.gov.au/data/assets/pdf_file/0004/141628/2015-16_FPA_annual_report.pdf
- FPA (Forest Practice Authority) (2016b). *Monitoring the effectiveness of the biodiversity provisions of the Tasmanian Forest Practices Code*. FPA, Hobart. www.fpa.tas.gov.au/research_and_monitoring
- FPA (Forest Practices Authority) (2017a). *State of the forests Tasmania 2017*. FPA, Hobart. www.fpa.tas.gov.au/FPA_publications/state_of_the_forests_tasmania_reports and www.fpa.tas.gov.au/data/assets/pdf_file/0005/163418/State_of_the_Forests_Report_2017_-_erratum_Feb_2018.pdf
- FPA (Forest Practices Authority) (2017b). *Tree fern management plan for the harvesting, transporting or trading of Dicksonia antarctica in Tasmania*. FPA, Hobart.
- FPC (Forest Products Commission) (2012). *Forest Products Commission Annual Report 2011–12*. FPC, Perth.
- FPC (Forest Products Commission) (2013). *Forest Products Commission Annual Report 2012–13*. FPC, Perth.
- FPC (Forest Products Commission) (2014). *Forest Products Commission Annual Report 2013–14*. FPC, Perth.
- FPC (Forest Products Commission) (2015). *Forest Products Commission Annual Report 2014–15*. FPC, Perth.
- FPC (Forest Products Commission) (2016). *Forest Products Commission Annual Report 2015–16*. FPC, Perth. www.fpc.wa.gov.au/file/2314/download
- FPC (Forest Products Commission) (2017). *Forest Products Commission Annual Report 2016–17*. FPC, Perth. www.fpc.wa.gov.au/file/2532/download
- Fraser LM and Ormiston A (2010). *Understanding Financial Statements*. 9th edition, Pearson, New Jersey.
- Furlan E, Stoklosa J, Griffith J, Gust N, Ellis R, Huggins RM and Weeks AR (2012). Small population size and extremely low levels of genetic diversity in island populations of the platypus, *Ornithorhynchus anatinus*. *Ecology and Evolution* 2:844–857. doi.org/10.1002/ece3.195
- FWPA (Forest and Wood Products Australia) (2008). *Wood recovery and recycling: A source book for Australia*. FWPA, Melbourne.
- FWPA (Forest and Wood Products Australia) (2010). *National primary industries research, development and extension (RD&E) framework: RD&E strategy for the forest and wood products sector*. FWPA, Melbourne. www.fwpa.com.au/images/corporatedocuments/National_FWPA_RDE%20strategy.pdf
- FWPA (Forest and Wood Products Australia) (2017). *Forest and Wood Products Australia Strategic Plan 2017–2022*. FWPA, Melbourne.
- Gálvez N, Guillera-Aroita G, Morgan BJT and Davies ZG (2016). Cost-efficient effort allocation for camera-trap occupancy surveys of mammals. *Biological Conservation* 204:350–359. doi.org/10.1016/j.biocon.2016.10.019
- Ganesharajah C (2009). *Indigenous health and wellbeing: the importance of country*. Native Title Research Unit, Australian Institute for Aboriginal and Torres Strait Islander Studies.
- Gardiner C and Larmour J (1995). *Seed collections and ex situ conservation measures for Eucalyptus benthamii from the Kedumba Valley*. CSIRO Division of Forestry, Canberra.
- Garnett ST, Austin BJ, Shepherd P and Zander KK (2016). *Culture-Based Enterprise Opportunities for Indigenous People in the Northern Territory, Australia*. In: Indigenous people and economic development – An international perspective (Iankova K, Hassan A, L'Abbe R, eds). Routledge Taylor and Francis Group New York, pp.131–152.
- Gavran M (2013). *Australian plantation statistics 2013 update*. ABARES, Canberra.
- Gavran M (2014). *Australian plantation statistics 2014 update*. ABARES, Canberra.
- Gavran M (2015). *Australian plantation statistics 2015 update*. ABARES, Canberra.
- Gavran M, Burns K, Hug B, Frakes I and Gupta M (2014). *ABARES National Wood Processing Survey: 2012–13*. ABARES research report 14.6, Canberra.
- Gavran M, Frakes I, Davey S and Mahendrarajah S (2012). *Australia's Plantation Log Supply 2010–2054*. ABARES, Canberra.
- Ghaffariyan MR (2016). Analysis of forestry work accidents in five Australian forest companies for the period 2004 to 2014. *Journal of Forest Science* 62:545–552.

- Gibson L, Cowan M, Handasyde T and Keighery G (2017). *Biodiversity surveys in the Northern Kimberley coastal region – Balanggarra and Dambimangari Country*. Department of Parks and Wildlife, Perth. library.dbca.wa.gov.au/static/FullTextFiles/071949.pdf
- Goodbody T, Coops N, Marshall P, Tompalski P and Crawford P (2017). Unmanned aerial systems for precision forest inventory purposes: A review and case study. *The Forestry Chronicle* 93:71–81.
- Gorman J, Courtenay K and Brady C (2016). *Production of Terminalia ferdinandiana Excell. in Northern Australia*. In: Australian native plants: cultivation and uses in the health and food industries. (Sultanbawa Y and Sultanbawa F, eds.), CRC Press/Taylor & Francis Group, Boca Raton, Florida, pp.89–103.
- Government of South Australia (2015). *Report of the Auditor-general. Annual Report for the year ended 30 June 2015*. Government of South Australia, Adelaide. www.audit.sa.gov.au/publications/2015
- Government of Western Australia (2016). *Reframing rural fire management: report of the special inquiry into the January 2016 Waroona fire*. Public Sector Commission, Perth. publicsector.wa.gov.au/sites/default/files/documents/waroona_fires_2016_-_volume_1_-_report_final.pdf
- Granados GM, McTaggart AR, Barnes I, Rodas CA, Roux J and Wingfield MJ (2017). The pandemic biotype of *Austropuccinia psidii* discovered in South America. *Australasian Plant Pathology* 46:267–275.
- Grattapaglia D (2016). *Genomic selection in tropical Eucalyptus breeding: advantages and challenges*. In: Forest Genetics for productivity conference: the next generation. Rotorua, New Zealand, 14–18 March 2016. Scion and IUFRO.
- Green Triangle Forest Products (2015). *Green Triangle Forest Management Plan*. onefortyone.com/wp-content/uploads/2014/07/OFOVersion-GTForestManagement-Plan-Final.pdf
- Haddad NM, Brudvig LA, Clobert J, Davies KF, Gonzalez A, Holt RD, Lovejoy TE, Sexton JO, Austin MP, Collins CD, Cook WM, Damschen EI, Ewers RM, Foster BL, Jenkins CN, King AJ, Laurance WF, Levey DJ, Margules CR, Melbourne BA, Nicholls AO, Orrock JL, Song D-X and Townshend JR (2015). Habitat fragmentation and its lasting impact on Earth's ecosystems. *Science Advances* 1:e1500052. doi.org/10.1126/sciadv.1500052
- Hamilton M, Joyce K, Williams W, Dutkowski G and Potts B (2008). Achievements in forest tree improvement in Australia and New Zealand 9. Genetic improvement of *Eucalyptus nitens* in Australia. *Australian Forestry* 71:82–93. doi.org/10.1080/00049158.2008.10676274
- Hancock GR, Hugo J, Webb AA and Turner L (2017). Sediment transport in steep forested catchments – An assessment of scale and disturbance. *Journal of Hydrology* 547:613–622.
- Hancock N, Harris R, Broadhurst L and Hughes L (2016). Climate-ready revegetation. A guide for natural resource managers. Macquarie University, Sydney. anpc.asn.au/resources/climate_ready_revegetation
- Hansda R (2009). *The Outlook for Non-wood Forest Products in Asia and the Pacific*. Working Paper APFSOS II/WP/2009/18, Food and Agriculture Organization of the United Nations, Bangkok.
- Hardner CM, Peace C, Lowe AJ, Neal J, Pisanu P, Powell M, Schmidt A, Spain C and Williams K (2009). Genetic resources and domestication of *Macadamia*. *Horticultural Reviews* 35, Chapter 1. doi.org/10.1002/9780470593776.ch1
- Hardner CM, Pisanu, PC and Boyton SJ (2004). *National macadamia germplasm conservation program*. Horticulture Australia Ltd., Sydney.
- Harris T, Hope P, Oliver E, Smalley R, Arblaster J, Holbrook N, Duke N, Pearce K, Braganza K and Bindoff N (2017). *Climate drivers of the 2015 Gulf of Carpentaria mangrove dieback*. Earth Systems and Climate Change Hub Technical Report No. 2, NESP Earth Systems and Climate Change Hub Australia, 32 pp.
- Harrison PA, Vaillancourt RE, Harris RMB and Potts BM (2017). Integrating climate change and habitat fragmentation to identify candidate seed sources for ecological restoration. *Restoration Ecology* 25:524–531.
- Harwood C (2011). *New introductions – doing it right*. In: Developing a eucalypt resource: learning from Australia and elsewhere. Proceedings of a conference held at the Wood Technology Research Centre, University of Canterbury, New Zealand, pp.43–54.
- Healy S (2006). *Cultural resilience, identity and the restructuring of political power in Bolivia*. The 11th Biennial Conference of the International Association for the Study of Common Property. Bali, Indonesia, p.5.
- Heath JT, Chafer CJ, Bishop TFA and van Ogtrop FF (2015). Wildfire effects on soil carbon and water repellency under eucalyptus forest in Eastern Australia. *Soil Research* 53:13–23.
- Heath JT, Chafer CJ, Bishop TFA and van Ogtrop FF (2016). Post-fire recovery of eucalypt-dominated vegetation communities in the Sydney Basin, Australia. *Fire Ecology* 12:53–79.
- Heath JT, Chafer CJ, van Ogtrop FF and Bishop TFA (2014). Post-wildfire recovery of water yield in the Sydney Basin water supply catchments: An assessment of the 2001/2002 wildfires. *Journal of Hydrology* 519:1428–1440.
- Heinsohn R, Webb M, Lacy R, Terauds A, Alderman R and Stojanovic D (2015). A severe predator-induced population decline predicted for endangered, migratory swift parrots (*Lathamus discolor*). *Biological Conservation* 186:75–82. doi.org/10.1016/j.biocon.2015.03.006
- Hobbs R and McIntyre S (2005). Categorizing Australian landscapes as an aid to assessing the generality of landscape management guidelines. *Global Ecology and Biogeography* 14:1–15.
- Holloway I (2013). *Effects of cyclone Yasi on vegetation communities in the Tully/Mission Beach area*. Queensland Parks and Wildlife Service, 39 pp. www.wettropics.gov.au/cyclone-research.html
- Horticulture Innovation Australia (2016). *Macadamia Strategic Investment Plan 2017–2021*. Horticulture Innovation Australia, Sydney. www.horticulture.com.au/growers/macadamia-fund/fund-management/
- House of Representatives Select Committee (2003). *A Nation Charred: Report on the inquiry into bushfires*. House of Representatives Select Committee into the recent Australian bushfires, 23 October 2003, Commonwealth of Australia, Canberra. www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=bushfires/inquiry/report.htm
- Hughes V, Little S and Whiting G (2016). *The Living Murray Icon Sites Monitoring 2013–14*. Murray–Darling Basin Authority, Canberra, February 2016. www.mdba.gov.au/publications/mdba-reports/living-murray-monitoring-report-2013-14
- ILC (Indigenous Land Corporation) (2012). *Land Acquisition Program (Socio-Economic Development) 2012 Handbook*. ILC, Adelaide.
- Industry Edge (2017). *2016 National Pulp & Paper Sustainability Report*. AFPA (Australian Forest Products Association), Canberra. ausfpa.com.au/wp-content/uploads/2017/09/AFPA-Sust-Report_vF.pdf

- IUCN (International Union for Conservation of Nature) (1994). *Guidelines for Protected Area Management Categories*. IUCN and the World Conservation Monitoring Centre, Gland, Switzerland, and Cambridge, UK.
- Jackson WJ, Argent RM, Bax NJ, Clark GF, Coleman S, Cresswell ID, Emmerson KM, Evans K, Hibberd MF, Johnston EL, Keywood MD, Klekociuk A, Mackay R, Metcalfe D, Murphy H, Rankin A, Smith DC and Wienecke B (2016). *Australia state of the environment 2016: overview*. Independent report to the Australian Government Minister for the Environment and Energy, Australian Government Department of the Environment and Energy, Canberra. soe.environment.gov.au/theme/overview
- James B, Blood K and Raleigh R (2016). Buffel grass (*Cenchrus ciliaris* L.), an early invader in Victoria. 20th Australasian Weeds Conference (Randall R, Lloyd S and Borger C., eds), pp.337–338. Perth, Western Australia.
- Jamshidi R, Dragovich D and Webb AA (2014). Catchment scale geostatistical simulation and uncertainty of soil erodibility using sequential Gaussian simulation. *Environment Earth Science* 71:4965–4976.
- Jay A, Sharpe D, Nichols D and Vanclay J (2009). *Sustainable Private Native Forestry: A review of timber production, biodiversity and soil and water indicators, and their applicability to northeast NSW*. Rural Industries Research and Development Corporation, Publication No. 09/022 Project No. USC-8A, March. www.agrifutures.com.au/product/sustainable-private-native-forestry-timber-production-biodiversity-and-soil-and-water-indicators-and-their-applicability-to-northeast-nsw/
- Jeffrey M and Brooks S (2016). *Eradication in the tropics: constantly changing and adapting*. In: Proceedings of the 20th Australasian Weeds Conference (Randall R, Lloyd S and Borger C, eds), Perth, Western Australia, pp.23–27.
- Jones OD, Nyman P and Sheridan GJ (2014). Modelling the effects of fire and rainfall regimes on extreme erosion events in forested landscapes. *Stochastic Environmental Research and Risk Assessment* 28:2015–2025.
- Kais MS and Islam SM (2016). Community Capitals as Community Resilience to Climate Change: Conceptual Connections. *International Journal of Environmental Research and Public Health* 13:1211. www.mdpi.com/1660-4601/13/12/1211
- Keenan RJ (2017). Climate change and Australian production forests: impacts and adaptation. *Australian Forestry* 80:197–207. doi.org/10.1080/00049158.2017.1360170
- Keenan RJ and Nitschke C (2016). Forest management options for adaptation to climate change: a case study of tall, wet eucalypt forests in Victoria's Central Highlands region. *Australian Forestry* 79:96–107.
- Keogh R, Mullins I and Robinson A (2010). *Pollination Aware Case Study 19: Macadamia*. Rural Industries Research and Development Corporation, Horticulture Australia Limited and the Australian Government Department of Agriculture, Fisheries and Forestry, RIRDC Publication No 10/126, Canberra, August. www.agrifutures.com.au/product/pollination-aware-case-study-macadamia/
- Kerins S and Green J (2018). *Like a rusty nail, you can never hold us blackfellas down; cultural resilience in the southwest Gulf of Carpentaria*. In: 2Way Country – transition to a resilient North Australia land sector economy. Bushfire and Natural Hazards Cooperative Research Centre, in press.
- Kile GA, Nambiar EKS and Brown AG (2014). The rise and fall of research and development for the forest industry in Australia. *Australian Forestry* 77:142–152.
- Kinal J and Stoneman GL (2011). Hydrological impact of two intensities of timber harvest and associated silviculture in the jarrah forest in south-western Australia. *Journal of Hydrology* 399:108–120.
- Kinal J and Stoneman GL (2012). Disconnection of groundwater from surface water causes a fundamental change in hydrology in a forested catchment in south-western Australia. *Journal of Hydrology* 472–473:14–24.
- Kingsley J, Townsend M, Henderson-Wilson C and Bolam B (2013). Developing an Exploratory Framework Linking Australian Aboriginal Peoples' Connection to Country and Concepts of Wellbeing. *International Journal of Environmental Research and Public Health* 10:678–698.
- Koch AJ, Chuter A, Munks and SA (2012). *A review of forestry impacts on biodiversity and the effectiveness of 'off-reserve' management actions in areas covered by the Tasmanian forest practices system*. Independent Verification Group Forest Conservation Report 10, Tasmanian Forests Intergovernmental Agreement, 20 January 2012, Forest Practices Authority Scientific Report, Hobart, Tasmania.
- Koehn JD, Copeland C and Stamation K (2014a). The future for managing fishes in the Murray–Darling Basin, south-eastern Australia. *Ecological Management and Restoration* 15:1–2. doi.org/10.1111/emr.12098
- Koehn JD, Lintermans M and Copeland C (2014b). Laying the foundations for fish recovery: The first 10 years of the Native Fish Strategy for the Murray–Darling Basin, Australia. *Ecological Management and Restoration* 15:3–12. doi.org/10.1111/emr.12090
- Konczak I, Maillot F and Dalar A (2014). Phytochemical divergence in 45 accessions of *Terminalia ferdinandiana* (Kakadu plum). *Food Chemistry* 151:248–256.
- Konczak I, Zabarar D, Dunstan M and Aguas P (2010). Antioxidant capacity and hydrophilic phytochemicals in commercially grown native Australian fruits. *Food Chemistry* 123:1048–1054.
- Langhans C, Smith HG, Chong DMO, Nyman P, Lane PNJ and Sheridan GJ (2016). A model for assessing water quality risk in catchments prone to wildfire. *Journal of Hydrology* 534:407–426. doi.org/10.1016/j.jhydrol.2015.12.048
- Langton M (2018). *Welcome to country: a travel guide to Indigenous Australia*. Hardie Grant Travel, Melbourne. Written with research assistance by Nina Fitzgerald and Amba-Rose Atkinson.
- Larcombe J and Bath A (2017). *Northern prawn fishery*. In: Fishery status reports 2017, Chapter 5. ABARES, Canberra, pp.63–84.
- Larmour J (1993). *Seed collections of Eucalyptus benthamii, Kedumba Valley*. CSIRO Division of Forestry, Canberra.
- Law B, Caccamo G, Roe P, Truskinger A, Brassil T, Gonsalves L, McConville A and Stanton M (2017). Development and field validation of a regional, management-scale habitat model: A koala *Phascolarctos cinereus* case study. *Ecology and Evolution* 7:7475–7489. doi.org/10.1002/ece3.3300
- Law BS, Chidel M and Law PR (2018). Forest bat population dynamics over 14 years at a climate refuge: effects of timber harvesting and climate extremes. *PLoS ONE* 13(2):e0191471. doi.org/10.1371/journal.pone.0191471
- Lee LS and Courtenay K (2016). *Enrichment plantings as a means of enhanced bush food and bush medicine plant production in remote arid regions – a review and status report*. In: Learning Communities, Special Issue: Synthesis & Integration, Number 19:64–75. www.cdu.edu.au/sites/default/files/the-northern-institute/10.18793-lcj2016.19.05-revised.pdf

- Lefort P and Grove S (2009). Early responses of birds to clearfelling and its alternatives in lowland wet eucalypt forest in Tasmania, Australia. *Forest Ecology and Management* 259:460–471. doi.org/10.1016/j.foreco.2009.04.022
- Legge S, Murphy S, Kingswood R, Maher B and Swan D (2011). EcoFire: restoring the biodiversity values of the Kimberley region by managing fire. *Ecological Management & Restoration* 12:84–92. doi.org/10.1111/j.1442-8903.2011.00595.x
- Lindenmayer D, Blanchard W, McBurney L, Blair D, Banks SC, Driscoll D, Smith AL and Gill AM (2013). Fire severity and landscape context effects on arboreal marsupials. *Biological Conservation* 167:137–148. doi.org/10.1016/j.biocon.2013.07.028
- Lindenmayer D, Blanchard W, McBurney L, Blair D, Banks S, Likens GE, Franklin JF, Laurance WF, Stein JAR and Gibbons P (2012). Interacting factors driving a major loss of large trees with cavities in a forest ecosystem. *PLoS ONE* 7:e41864. doi.org/10.1371/journal.pone.0041864
- Lindenmayer D, Lesslie R, McAlpine C, Phinn S, Eyre T and Norman P (1999). *The development and implementation of landscape metrics for reporting forest fragmentation at field and landscape levels*. Project Summary of Outcomes for Forest and Wood Products Research and Development Corporation, Melbourne.
- Lindenmayer D, McIntyre S and Fischer J (2003). Birds in eucalypt and pine forests: landscape alteration and its implications for research models of faunal habitat use. *Biological Conservation* 110:45–53.
- Lintermans M, Lyon JP, Hames F, Hammer MP, Kearns J, Raadik TA and Hall A (2014). Managing fish species under threat: case studies from the Native Fish Strategy for the Murray-Darling Basin, Australia. *Ecological Management and Restoration* 15:57–61. doi.org/10.1111/emr.12094
- Lovelock CE, Feller IC, Reef R, Hickey S and Ball MC (2017). Mangrove dieback during fluctuating sea levels. *Scientific Reports* 7:1680.
- LPAG (Leadbeater's Possum Advisory Group) (2014a). *Leadbeater's Possum Technical Report*. Report to the Minister for Environment and Climate Change and the Minister for Agriculture and Food Security, Victorian Government. www.wildlife.vic.gov.au/_data/assets/pdf_file/0024/46446/Leadbeaters-Possum-Advisory-Group-Technical-Report.pdf
- LPAG (Leadbeater's Possum Advisory Group) (2014b). *Leadbeater's Possum Recommendations*. Report to the Minister for Environment and Climate Change and the Minister for Agriculture and Food Security, Victorian Government. www.wildlife.vic.gov.au/_data/assets/pdf_file/0023/46445/Leadbeaters-Possum-Advisory-Group-Recommendations-Report.pdf
- Luke RH and McArthur AG (1978). *Bushfires in Australia*. Australian Government Publishing Service, Canberra, 350 pp.
- Lumsden LF, Nelson JL, Todd CR, Scroggie MP, McNabb EG, Raadik TA, Smith SJ, Acevedo S, Cheers G, Jemison ML and Nicol MD (2013). *A new strategic approach to biodiversity management – research component*. Department of Environment and Primary Industries. Arthur Rylah Institute for Environmental Research, Heidelberg. www.ari.vic.gov.au/_data/assets/pdf_file/0022/57613/Strategic-approach-to-biodiversity-management_research-2013.pdf
- Machado PdaS, Alfenas AC, Alfenas RF, Mohammed CL and Glen M (2015). Microsatellite analysis indicates that *Puccinia psidii* in Australia is mutating but not recombining. *Australasian Plant Pathology* 44:455–462.
- Magierowski RH, Davies PE, Read SM and Horrigan N (2012). Impacts of land use on the structure of river macroinvertebrate communities across Tasmania, Australia: spatial scales and thresholds. *Marine and Freshwater Research* 63:762–776. doi.org/10.1071/MF11267
- Maguire B and Cartwright S (2008). *Assessing a Community's Capacity to Manage Change: A Resilience Approach to Social Assessment*. Bureau of Rural Sciences, Canberra.
- Maraseni T, Reardon-Smith K, Griffiths G and Apan A (2016). Savanna burning methodology for fire management and emissions reduction: a critical review of influencing factors. *Carbon Balance and Management* 11:25. doi.org/10.1186/s13021-016-0067-4
- Matusick G, Ruthrof KX, Fontaine JB and Hardy GES-J (2016). *Eucalyptus* forest shows low structural resistance and resilience to climate change-type drought. *Journal of Vegetation Science* 27:493–503.
- McAlpine C, Lunney D, Melzer A, Menkhurst P, Phillips S, Phalen D, Ellis W, Foley W, Baxter G, de Villiers D, Kavanah R, Adams-Hosking C, Todd C, Whisson D, Molsher R, Walter M, Lawler I and Close R (2015). Conserving koalas: a review of the contrasting regional trends, outlooks and policy challenges. *Biological Conservation* 192:226–236. doi.org/10.1016/j.biocon.2015.09.020
- McCaw WL (2013). Managing forest fuels using prescribed fire – A perspective from southern Australia. *Forest Ecology and Management* 294:217–224.
- McCaw WL, Robinson RM and Williams MR (2011). Integrated biodiversity monitoring for the jarrah (*Eucalyptus marginata*) forest in the south-west Western Australia: the FORESTCHECK project. *Australian Forestry* 74:240–253.
- McClean N (2013). *Being on Country: Githabul approaches to mapping culture*. In: *Transcending the Culture–Nature Divide in Cultural Heritage* (Brockwell S, O'Connor S, Byrne D, eds). Canberra, Australian National University: pp.83–99.
- McInnes-Clarke S, Tulau M, Yang X and Chapman G (2014). *After the fire in Warrumbungle National Park, NSW – soil and landscape impacts and recovery*. Proceedings of the Soil Science Australia National Soil Science Conference, Warragul, Victoria.
- Meek PD, Ballard G, Claridge A, Kays R, Moseby K, O'Brien T, O'Connell A, Sanderson J, Swann DE, Tobler M and Townsend S (2014). Recommended guiding principles for reporting on camera trapping research. *Biodiversity Conservation* 23:2321–2343. doi.org/10.1007/s10531-014-0712-8
- Melzer A (2005). *Aspects of the ecology of the koala, Phascolarctos cinereus (Goldfuss 1817), in the sub-humid woodlands of central Queensland*. PhD thesis, University of Queensland.
- Melzer A, Ellis W, FitzGibbon S and Carrick F (2012). *Managing central Queensland's koala islands*. In: Flint N, Melzer A (eds) *Conserving central Queensland's koalas*. Koala Research Centre of Central Queensland, CQUniversity, Australia, Rockhampton, Queensland.
- Mendham DS, Drew D, Abadi A, Bartle J, Peck A and Crawford D (2015). *Potential cineole cost and availability from mallee eucalypt shelterbelt plantations in Western Australia*. CSIRO, Australia.
- Metcalfe DJ and Bui EN (2017). *Australia state of the environment 2016: land*. Independent report to the Australian Government Minister for the Environment and Energy, Australian Government Department of the Environment and Energy, Canberra. soe.environment.gov.au/theme/land

- Michael K (2016). *Waroona fire complex January 2016*. Report of the State Recovery Controller. Government of Western Australia.
- MIG (Montreal Process Implementation Group for Australia) (1998). *A Framework of Regional (Sub-National) Level Criteria and Indicators of Sustainable Forest Management in Australia*, Bureau of Rural Sciences, Canberra.
- MIG (Montreal Process Implementation Group for Australia) (2008). *Australia's State of the Forests Report 2008*. Bureau of Rural Sciences, Canberra. www.agriculture.gov.au/abares/forestsaustralia/sofr
- MIG (Montreal Process Implementation Group for Australia) and NFISC (National Forest Inventory Steering Committee) (2013). *Australia's State of the Forests Report 2013*. ABARES, Canberra. www.agriculture.gov.au/abares/forestsaustralia/sofr/sofr-2013
- Ministerial Council on Forestry, Fisheries and Aquaculture (1995). *Forest Practices Related to Wood Production in Plantations: National Principles*. www.agriculture.gov.au/forestry/australias-forests/plantation-farm-forestry/principles
- Ministry for Primary Industries (2015). *Sustainable Management of New Zealand's Forests: New Zealand's Third Country Report on the Montreal Process Criteria and Indicators*. Ministry for Primary Industries, Wellington, New Zealand.
- Mohanty S and Cock IE (2012). The chemotherapeutic potential of *Terminalia ferdinandiana*: Phytochemistry and bioactivity. *Pharmacognosy Review* 6:29–36. doi.org/10.4103/0973-7847.95855
- Montreal Process Working Group (2001). Montreal Process Capacity Building Workshop Summary, August 26–31, 2001, Portland, Oregon. www.montrealprocess.org/documents/meetings/adhoc/2001portland_e.pdf
- Montreal Process Working Group (2009a). *Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests*, The Montreal Process, 4th edition. www.montrealprocess.org/documents/publications/general/2009/2009p_4.pdf
- Montreal Process Working Group (2009b). *Technical Notes on Implementation of the Montreal Process Criteria and Indicators*, 3rd edition. www.montrealprocess.org/documents/publications/techreports/2009p_2.pdf
- Morin L, Aveyard R, Lidbetter JR and Wilson PG (2012). Investigating the host-range of the rust fungus *Puccinia psidii* sensu lato across tribes of the family Myrtaceae present in Australia. *PLoS One* 7:e35434.
- Morris R, Dragovich D and Ostendorf B (2012). *Hillslope erosion and post-fire sediment trapping at Mount Bold, South Australia*. Symposium on Wildfire and Water Quality: Processes, Impacts and Challenges. Banff, Canada, 11–14 June 2012.
- Morris RH, Bradstock RA, Dragovich D, Henderson MK, Penman TD and Ostendorf B (2014). Environmental assessment of erosion following prescribed burning in the Mount Lofty Ranges, Australia. *International Journal of Wildland Fire* 23:104–116.
- Morton CM (1992). *Diets of three species of tree-rat, Mesembriomys gouldii* (Grey), *M. macrurus* (Peters) and *Conilurus penicillatus* (Gould) from the Mitchell Plateau, Western Australia. Honours Thesis (University of Canberra, Canberra).
- Mossman Gorge Centre (2017). *Culture: Kuku Yalanji People*. www.mossmangorge.com.au/the-environment/culture
- Murphy BP, Bradstock RA, Boer MM, Carter J, Cary GJ, Cochrane MA, Fensham RJ, Russell-Smith J, Williamson GJ and Bowman DMJS (2013). Fire regimes of Australia: a pyrogeographic model system. *Journal of Biogeography* 40: 1048–1058. doi.org/10.1111/jbi.12065
- Murray–Darling Basin Ministerial Council (2003). *Native Fish Strategy for the Murray–Darling Basin 2003–2013*. Murray–Darling Basin Commission, May 2003, Canberra. www.mdba.gov.au/sites/default/files/archived/native-fish/NFS-for-the-MDB-2003-2013.pdf
- Mutendeudzi M, Read S, Howell C, Davey S and Clancy T (2013a). *Improving Australia's forest area estimate using a 'Multiple Lines of Evidence' approach*. ABARES, Canberra.
- Mutendeudzi M, Read S, Howell C, Davey S and Clancy T (2013b). *A 'Multiple Lines of Evidence' approach to Australia's forest cover estimate*. In: Managing our Forests into the 21st Century, Proceedings of the Institute of Foresters of Australia Conference, Canberra, 7–11 April 2013, Institute of Foresters of Australia, Canberra.
- Myburg AA, Grattapaglia D, Tuskan GA, Hellsten U, Hayes RD, Grimwood J, Jenkins J, Lindquist E, Tice H, Bauer D, Goodstein DM, Dubchak I, Poliakov A, Mizrahi E, Kulan ARK, van Jaarsveld I, Hussey SG, Pinard D, van der Merwe K, Singh P, Silva-Junior OB, Togawa RC, Pappas MR, Faria DA, Sansaloni CP, Petrolis CD, Yang X, Ranjan P, Tschaplinski TJ, Ye C, Li T, Sterck L, Vanneste K, Murat F, Soler M, San Clemente H, Saidi N, Cassan-Wang H, Dunand C, Hefer CA, Bornberg-Bauer E, Kersting AR, Vining K, Amarasinghe V, Ranik M, Naithani S, Elser J, Boyd AE, Liston A, Spatafora JW, Dharmawardhana P, Raja P, Sullivan C, Romanel E, Alves-Ferreira M, Külheim C, Foley W, Carocha V, Paiva J, Kudrna D, Brommonschenkel SH, Pasquali G, Byrne M, Rigault P, Tibbits J, Spokevicius A, Jones RC, Steane DA, Vaillancourt RE, Potts BM, Joubert F, Barry J, Pappas Jr GJ, Strauss SH, Jaiswal P, Grima-Pettenati J, Salse J, Van de Peer Y, Rokhsar DS and Schmutz J (2014). The genome of *Eucalyptus grandis* – a global tree for fiber and energy. *Nature* 510:356–362.
- National Forest Inventory (1998). *Australia's State of the Forests Report 1998*. Bureau of Rural Sciences, Canberra. www.agriculture.gov.au/abares/forestsaustralia/sofr
- National Forest Inventory (2003). *Australia's State of the Forests Report 2003*. Bureau of Rural Sciences, Canberra. www.agriculture.gov.au/abares/forestsaustralia/sofr
- NCC (National Competition Council) (2007). *National Competition Policy – Overview*. ncc.ncc.gov.au/pages/about
- NCVER (National Centre for Vocational Education Research) (2017). *Australian vocational education and training statistics: government-funded students and courses 2016*. NCVER, Adelaide.
- NCVER (National Centre for Vocational Education Research) (2018). *TVA program enrolments 2014–2016*.
- Neary DG, Smethurst PJ, Baillie BR, Petrone KC, Cotching WE and Baillie CC (2010). Does tree harvesting in streamside management zones adversely affect stream turbidity? — preliminary observations from an Australian case study. *Journal of Soils Sediments* 10:652–670.
- Nelson JL, Durkin LK, Cripps JK, Scroggie MP, Bryant DB, Macak PV, and Lumsden LF (2017). *Targeted surveys to improve Leadbeater's Possum conservation*. Arthur Rylah Institute for Environmental Research Technical Report Series No. 278. www.ari.vic.gov.au/_data/assets/word_doc/0023/93146/ARI-Technical-Report-278-Targeted-surveys-to-improve-Leadbeaters-Possum-conservation.docx
- New South Wales Government (2017). *NSW Biodiversity Conservation Trust*. www.landmanagement.nsw.gov.au/nsw-biodiversity-conservation-trust/

- NLP (National Landcare Program) (2017). *National Landcare Program – 20 Million Trees Program*. www.nrm.gov.au/national/20-million-trees
- NNTT (National Native Title Tribunal) (2009). *Native Title: An Overview*. NNTT, Perth.
- Nolan RH, Lane PNJ, Benyon RG, Bradstock RA and Mitchell PJ (2015). Trends in evapotranspiration and streamflow following wildfire in resprouting eucalypt forests. *Journal of Hydrology* 524:614–624.
- Northern Territory Government (2010). *Land Clearing Guidelines, Northern Territory Planning Scheme*. Darwin.
- NRMMC (Natural Resource Management Ministerial Council) (2004). *Directions for the National Reserve System – A Partnership Approach*. Australian Government Department of the Environment and Heritage, Canberra.
- NRMMC (Natural Resource Management Ministerial Council) (2005). *Voluntary Code of Practice for Firewood Merchants*. Natural Resource Management Ministerial Council, Canberra. www.firewood.asn.au/images/downloads/code%20080214.pdf
- NRMMC (Natural Resource Management Ministerial Council) (2008). *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes*. Commonwealth of Australia, Canberra. www.environment.gov.au/biodiversity/wildlife-trade/publications/national-code-practice-humane-shooting-kangaroos-and-wallabies-commercial
- NRMMC (Natural Resource Management Ministerial Council) (2009). *Australia's Strategy for the National Reserve System 2009–2030*. Australian Government, Canberra. www.environment.gov.au/land/nrs/publications/strategy-national-reserve-system
- NRMMC (Natural Resource Management Ministerial Council) (2010). *Australia's Biodiversity Conservation Strategy 2010–2030*, Australian Government Department of Sustainability, Environment, Water, Population and Communities, Canberra. www.environment.gov.au/system/files/resources/58321950-f8b6-4ef3-bb68-6f892420d601/files/biodiversity-strategy-2010.pdf
- NSW ALC (New South Wales Aboriginal Land Council) (2014). *Land rights and native title in NSW – a guide for the community*, NSW ALC, Parramatta, NSW. alc.org.au/media/90660/land%20rights%20and%20native%20title%20in%20nsw%20-%20a%20community%20guide%20final%20web_02.pdf
- NSW Government (2014). *Project 2023 — North Coast Resources Review*. New South Wales Department of Trade and Investment, Regional Infrastructure and Services, New South Wales Department of Primary Industries, Sydney. www.crownland.nsw.gov.au/data/assets/pdf_file/0013/520042/north-coast-timber-supply-summary-north-coast-forestry-resources-review.pdf
- NSW Government and Office of Environment and Heritage (2011). *NSW Forest Agreements Implementation Report 2009–2010: Upper North East, Lower North East, Eden and Southern Regions*. A report prepared by the Minister for the Environment as part of the implementation of the NSW forest agreements and integrated forestry operations approvals, Crown Forestry Section, Office of Environment and Heritage, Sydney. www.epa.nsw.gov.au/-/media/F2749F928C9A48E79CC19BB6D6C91A24.ashx?la=en
- NSW OEH (New South Wales Office of Environment and Heritage) (2016a). *Acid sulfate soil risk maps*. Office of Environment and Heritage, NSW Government. datasets.seed.nsw.gov.au/dataset/acid-sulfate-soils-risk0196c
- NSW OEH (New South Wales Office of Environment and Heritage) (2016b). *NSW Report on Native Vegetation 2013–14*. OEH, Sydney. www.environment.nsw.gov.au/resources/nativeveg/nsw-report-native-vegetation-2013-14.pdf
- NSW OEH (New South Wales Office of Environment and Heritage) (2016c). *Partnerships with Landholders – Conservation Partners Program*. www.environment.nsw.gov.au/cpp/ConservationPartners.htm
- NSW OEH (New South Wales Office of Environment and Heritage) (2017). *BioBanking: a market-based scheme*. www.environment.nsw.gov.au/biobanking/
- Nye ER, Dickman CR and Kingsford RT (2007). A wild goose chase – temporal and spatial variation in the distribution of the magpie goose (*Anseranas semipalmata*) in Australia. *Emu* 107:28–37. doi.org/10.1071/MU05012
- Nyman P, Sheridan GJ, Jones OD and Lane PNJ (2011). *Erosion and risk to water resources in the context of fire and rainfall regimes*. In: Proceedings of Bushfire CRC & AFAC 2010 Conference (Thornton RP, ed), September 2011, Sydney Australia. Bushfire CRC.
- Nyman P, Smith HG, Sherwin CB, Langhans C, Lane PNJ and Sheridan GJ (2015). Predicting sediment delivery from debris flows after wildfire. *Geomorphology* 250:173–186.
- O'Brien P and Rogers D (2017). *Gumgali Track to Korora Lookout – Orara East State Forest*. Forestry Corporation NSW Submission for Interpretation Australia Awards for Excellence.
- O'Connor K, Powell M, Nock C and Shapcott A (2015). Crop to wild gene flow and genetic diversity in a vulnerable *Macadamia* (Proteaceae) species in New South Wales, Australia. *Biological Conservation* 191:504–511.
- Offord CA and Meagher PF (eds.) (2009). *Plant Germplasm Conservation in Australia: Strategies and guidelines for developing, managing and utilising ex situ collections*. The Australian Network for Plant Conservation Inc. (ANPC) in partnership with Australian Seed Conservation and Research (AuSCaR). www.anpc.asn.au/plant-germplasm
- O'Grady AP, Almeida A, Siggins A and Hutley LB (2012). *Preliminary assessment of the water balance of Khaya senegalensis plantations in the Daly River Region, Northern Territory*. CSIRO Water for a Healthy Country Flagship, Australia, 54 pp.
- Omega Consulting and FWPA (Forest and Wood Products Australia) (2017). *FWPA Australian Timber Industry Investment Review*. FWPA, Melbourne. www.fwpa.com.au/images/Newsletter/Images/Statistics-count/2017/FWPA_Investment_Review_Final_Oct_2017.pdf
- Paap T, Burgess TI, Calver M, McComb JA, Shearer BL, Hardy GES-J and Klopfenstein NB (2017). A thirteen-year study on the impact of a severe canker disease of *Corymbia calophylla*, a keystone tree in Mediterranean-type forests. *Forest Pathology* 47:e12292.
- Packham JM, Elliott HJ and Bashford R (2008). Rate of spread of myrtle wilt disease in undisturbed Tasmanian rainforests. *Australian Forestry* 73:64–69.
- Page KL, Dalal RC and Raison RJ (2011). Impact of the harvesting of Australian native forests on soil carbon sequestration and CO₂, N₂O and CH₄ fluxes. *Australian Journal of Botany* 59:654–669.
- Parks and Wildlife Service, Forestry Tasmania and Department of Primary Industries, Water and Environment, Tasmania (2003). *Tasmanian Reserve Management Code of Practice*, Department of Tourism, Parks, Heritage and the Arts, Hobart. www.parks.tas.gov.au/file.aspx?id=34688

- Parsons M and Pritchard P (2009). *The Role, Values and Potential of Australia's Private Native Forests*. RIRDC publication 09/049, Rural Industries Research and Development Corporation, Canberra. www.agrifutures.com.au/product/the-role-values-and-potential-of-australia-s-private-native-forests/
- Parsons M, Frakes I and Gerrard A (2007). *Plantations and water use*. Bureau of Rural Sciences, Canberra.
- Paul K and Roxburgh S (2017). *FullCAM: building capability via data-informed parameters. Accurately tracking forest carbon from biomass to soil*. Report for Department of the Environment and Energy. CSIRO, Canberra, Australia.
- Paul K, Polglase PJ, Nyakuengama JG and Khanna PK (2002). Change in soil carbon following afforestation. *Forest Ecology and Management* 168:241–257.
- PBCRC (Plant Biosecurity Cooperative Research Centre) (2012). *Plant Biosecurity Cooperative Research Centre Investment Plan 2012–18*. PBCRC, Canberra.
- Peace C, Hardner C, Brown AHD, O'Connor K, Vithanage V, Turnbull C and Carroll BJ (2001). *The diversity and origins of macadamia cultivars*. In: Australian Macadamia Society Limited 2001 Conference Report. AMS 2001 Conference and Annual General Meeting, Tweed Heads, NSW, 25–27 October 2001, pp.34–37. www.researchgate.net/publication/43464395_The_diversity_and_origins_of_macadamia_cultivars
- Peace C, Ming R, Schmidt A, Manners J and Vithanage V (2008). *Genomics of Macadamia, a Recently Domesticated Tree Nut Crop*. In: Moore PH, Ming R (eds.) *Genomics of Tropical Crop Plants*. Plant Genetics and Genomics: Crops and Models, Volume 1. Springer, New York. doi.org/10.1007/978-0-387-71219-2_13
- Peace M, McCaw L, Santos B, Kepert JD, Burrows N and Fawcett JB (2017). Meteorological drivers of extreme fire behaviour during the Waroona bushfire, Western Australia, January 2016. *Journal of Southern Hemisphere Earth Systems Science* 67:79–106. www.bom.gov.au/jshess/docs/2017/Peace.pdf
- Pegg G, Taylor T, Entwistle P, Guymer GP, Giblin F and Carnegie A (2017). Impact of *Austropuccinia psidii* (myrtle rust) on Myrtaceae rich wet sclerophyll forests in south-east Queensland. *PLoS One* 12:e0188058.
- PFT (Private Forests Tasmania) (2005). *Tasmanian Private Property Wood Flow Estimates 2002 to 2031*. Private Forests Tasmania, Hobart. stors.tas.gov.au/au-7-0095-01933
- PFT (Private Forests Tasmania) (2016). *Private Forests Tasmania Annual Report 2015–16*. PFT, Hobart. www.pft.tas.gov.au/publications/annual_report
- PFT (Private Forests Tasmania) (2017). *About PFT – Overview*. PFT, Hobart. www.pft.tas.gov.au/about-pft/overview
- Pink B and Welch D (2013). *Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 (Revision 2.0)*. Cat. no. 1292.0, ABS, Canberra.
- PIRSA (Primary Industries and Regions SA) (2017). *South East Forestry Partnerships Program (SEFPP)*. www.pir.sa.gov.au/forestry/south_east_forestry_partnerships_program_sefpp
- Pitman M, Ferguson I, Burgman M, Bradshaw J, Noble I and Raison J (1996). *Report of the Victorian Old Growth Joint Scientific Advisory Group*. Environment and Heritage Report East Gippsland: Appendix I. Commonwealth and Victorian Government. www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-east-gippsland/environment-reports/Environment_and_Heritage_Report_Appendix.pdf
- Pittman GW (2003). *Occurrence and use of tree hollows by mammals in fragmented and continuous savanna woodlands in Northern Australia*. Honours thesis, Charles Darwin University, Darwin.
- PM&C (Prime Minister and Cabinet) (2015a). *IPA Factsheet*. www.pmc.gov.au/sites/default/files/publications/IPA_FS_2015_2.pdf
- PM&C (Prime Minister and Cabinet) (2015b). *Working on Country and Indigenous Protected Areas programmes 2013–14 Annual report*. www.pmc.gov.au/resource-centre/indigenous-affairs/reporting-back-2013-14-working-country-indigenous-protected-areas-programmes
- Ponce Reyes R, Firn J, Nicol S, Chadès I, Stratford DS, Martin TG, Whitten S and Carwardine J (2016). *Priority Threat Management for Imperilled Species of the Queensland Brigalow Belt*. CSIRO, Brisbane.
- Post DA, Chiew FHS, Teng J, Viney NR, Ling FLN, Harrington G, Crosbie RS, Graham B, Marvanek S and McLoughlin R (2012). A robust methodology for conducting large-scale assessments of current and future water availability and use: A case study in Tasmania, Australia. *Journal of Hydrology* 412–413:233–245.
- Potts BM, Barbour RC and Hingston AB (2001). *Genetic pollution from farm forestry using eucalypt species and hybrids*. Report to the Joint Venture Agroforestry Program, RIRDC Publication 01/114, Canberra. www.agrifutures.com.au/product/genetic-pollution-from-farm-forestry/
- Potts BM, Sandhu KS, Wardlaw T, Freeman J, Li H, Tilyard P and Park RF (2016). Evolutionary history shapes the susceptibility of an island tree flora to an exotic pathogen. *Forest Ecology and Management* 368:183–193.
- Powell J (1998). *People and trees: a thematic history of south east Queensland with particular reference to forested areas, 1823–1997*. Queensland CRA/RFA steering committee. Jointly published by the Queensland and Commonwealth governments.
- Powell M, Accad A and Shapcott A (2014). Where they are, why they are there, and where they are going: using niche models to assess impacts of disturbance on the distribution of three endemic rare subtropical rainforest trees of Macadamia (Proteaceae) species. *Australian Journal of Botany* 62:322–334. doi.org/10.1071/BT14056
- Private Forestry Consultative Committee (2002). *Plantations for Australia: The 2020 Vision*. ABARES, Canberra.
- Prober SM, Byrne M, McLean EH, Steane DA, Potts BM, Vaillancourt RE and Stock WD (2015a). Climate-adjusted provenancing: a strategy for climate-resilient ecological restoration. *Frontiers in Ecology and Evolution* 3:65. doi.org/10.3389/fevo.2015.00065
- Prober SM, Potts BM, Bailey T, Byrne M, Dillon S, Harrison PA, Hoffmann AA, Jordan R, McLean EH, Steane DA, Stock WD and Vaillancourt RE (2016). Climate adaptation and ecological restoration in eucalypts. *Proceedings of the Royal Society of Victoria* 128:40–53.
- Prober SM, Williams KJ, Harwood CD, Doerr VAJ, Jeanneret T, Manion G and Ferrier S (2015b). *Helping Biodiversity Adapt: Supporting climate adaptation planning using a community-level modelling approach*. CSIRO Land and Water Flagship, Canberra, ACT, pp.59. adaptnrm.csiro.au/wp-content/uploads/2015/09/AdaptNRM_M4_BiodiversityAdaptation_screen_update.pdf
- Productivity Commission (2017). *Transitioning Regional Economies*. Study Report, Commonwealth of Australia, Canberra.

- PwC's Indigenous Consulting (2017). *Emerging Business Models for the Kakadu Plum Industry*. Agrifutures Australia. AgriFutures Australia Publication No 18/003, AgriFutures Australia, Wagga Wagga. www.agrifutures.com.au/wp-content/uploads/publications/18-003.pdf
- PWSNT (Parks and Wildlife Service Northern Territory) (2009). *Management program for the magpie goose (Anseranas semipalmata) in the Northern Territory of Australia, 2009–2014*. Department of Natural Resources, Environment, the Arts and Sport, Palmerston, Northern Territory.
- Queensland Department of Environment and Heritage (2015). *Queensland commercial macropod management program annual report 2014*. State Government of Queensland, Brisbane.
- Queensland Government (1998). *Background to Assessment of Queensland's Ecologically Sustainable Forest Management Systems and Processes – Description Report*. Department of Natural Resources – Resource Management, Department of Communications, Information, Local Government and Planning, Department of Primary Industries – Forestry and Department of Environment and Heritage, Brisbane.
- Raison RJ, Smethurst PJ, Moggridge B and Nambiar EKS (2012). *Assessment of Code of Practice for Plantation Forestry: Northern Territory*. CSIRO National, Research Flagships for Sustainable Agriculture, Australian Government Department of Agriculture, Fisheries and Forestry.
- Randall BW, Walton DA, Lee DJ and Wallace HM (2016). The risk of pollen-mediated gene flow into a vulnerable eucalypt species. *Forest Ecology and Management* 381:297–304. doi.org/10.1016/j.foreco.2016.09.042
- Rankmore BR (2006). *Impacts of Habitat Fragmentation on the Vertebrate Fauna of the Tropical Savannas of Northern Australia; with special reference to medium-sized mammals*. PhD Thesis, Charles Darwin University, Darwin.
- Rawtec (2012). *South Australia's Recycling Activity Survey, 2011–12 Financial Year Report*. Rawtec, Glenelg South.
- Rawtec (2017). *South Australia's Recycling Activity Survey, 2015–16 Financial Year Report*. Rawtec, Glenelg South.
- Renwick AR, Robinson, CJ, Garnett St, Leiper I, Possingham HP and Cawardine J (2017). Mapping Indigenous land management for threatened species conservation: An Australian case-study. *PLoS One* 12:e0173876.
- Resource Assessment Commission (1992). *A Survey of Australia's Forest Resource*. Australian Government Publishing Service, Canberra.
- Riitters K, Wickham J, O'Neill R, Jones B and Smith E (2000). Global-scale patterns of forest fragmentation. *Conservation Ecology* 4:3. www.consecol.org/vol4/iss2/art3/ and www.ecologyandsociety.org/vol4/iss2/art3/
- RIRDC (Rural Industries Research and Development Corporation) (2007a). *Honeybee R&D Plan 2007–2012*. RIRDC Publication No 07/056, RIRDC Project No AGL-4A. RIRDC, Canberra. www.agrifutures.com.au/product/honeybee-five-year-plan-2007-2012/
- RIRDC (Rural Industries Research and Development Corporation) (2007b). *The Effectiveness and Safety of Australian Tea Tree Oil*. RIRDC, Canberra. www.agrifutures.com.au/product/the-effectiveness-and-safety-of-australian-tea-tree-oil/
- RIRDC (Rural Industries Research and Development Corporation) (2014a). *Focus on Kakadu Plum Terminalia ferdinandiana: Industry overview*. RIRDC publication 14/115 (Fact sheet), RIRDC, Canberra. www.agrifutures.com.au/product/focus-on-kakadu-plum/
- RIRDC (Rural Industries Research and Development Corporation) (2014b). *Focus on lemon myrtle Backhousia citriodora: Industry overview*. RIRDC publication 14/117 (Fact sheet), RIRDC, Canberra. www.agrifutures.com.au/product/focus-on-lemon-myrtle/
- RIRDC (Rural Industries Research and Development Corporation) (2014c). *Focus on wattle seed (Acacia victoriae)*. Rural Industries Research and Development Corporation and Australian Native Food Industry Limited. www.agrifutures.com.au/product/focus-on-wattle-seed/
- Risler JA (2017). *Optimising camera trap survey effort to reliably detect a threatened species, the black-footed tree-rat, Mesembriomys gouldii, in open forest and woodland of tropical savannas of the Top End, Northern Territory*. Masters Thesis, Charles Darwin University, Darwin. espace.cdu.edu.au/eserv/cdu:60869/Thesis_CDU_60869_Risler_J.pdf
- Roberts S, Barton-Johnson R, McLarin M and Read S (2015). Predicting the water use of *Eucalyptus nitens* plantation sites in Tasmania from inventory data, and incorporation of water use into a forest estate model. *Forest Ecology and Management* 343:110–122.
- Rodriguez D, Tomasella J and Linhare C (2010). Is the forest conversion to pasture affecting the hydrological response of Amazonian catchments? Signals in the Ji-Parana Basin. *Hydrological Processes* 24:1254–1269.
- Ross C and Brack C (2015). *Eucalyptus viminalis* dieback in the Monaro region, NSW. *Australian Forestry* 78:243–253.
- Roxburgh S, Karunaratne S, Paul K, Lucas R, Armston J and Sun S (2017). *A revised above-ground maximum biomass layer for Australia's national carbon accounting system*. CSIRO.
- Russell-Smith J, Whitehead P and Cooke P (2009). *Culture, ecology and economy of fire management in north Australian savannas: Rekindling the wurrk tradition*. CSIRO Publishing, Victoria, Australia.
- Ruthrof K, Matusick G and Hardy G (2015). Early differential responses of co-dominant canopy species to sudden and severe drought in a Mediterranean-climate type forest. *Forests* 6:2082–2091.
- Ryan M (2013). Adaptive silviculture in regrowth eucalypt forests in Victoria and the implications for water, wood, wildlife and wildfire. *Australian Forestry* 76:173–182.
- Saalfeld K and Fukuda Y (2017). *NT saltwater crocodile (Crocodylus porosus) wildlife trade management plan: 2015–2016 monitoring report*. Department of Environment and Natural Resources, Palmerston, Northern Territory. denr.nt.gov.au/land-resource-management/saltwater-crocodile-monitoring
- Saddler S and Hammer M (2010). *National Recovery Plan for the Yarra Pygmy Perch Nannoperca obscura*. Department of Sustainability and Environment, Melbourne. www.environment.gov.au/system/files/resources/4526b588-728f-46a8-a572-e53e1f853cef/files/yarra-pygmy-perch.pdf
- Safe Work Australia (2010). *Compendium of Workers' Compensation Statistics Australia 2007–08*. Safe Work Australia, Canberra.
- Safe Work Australia (2011). *Compendium of Workers' Compensation Statistics Australia 2008–09*. Safe Work Australia, Canberra.
- Safe Work Australia (2012). *Compendium of Workers' Compensation Statistics Australia 2009–10*. Safe Work Australia, Canberra.

- Sandhu KS, Karaoglu H, Zhang P and Park RF (2016). Simple sequence repeat markers support the presence of a single genotype of *Puccinia psidii* in Australia. *Plant Pathology* 65:1084–1094.
- Saunders D and Tzaros C (2011). *National Recovery Plan for the Swift Parrot* *Lathamus discolor*. Birds Australia, Melbourne. www.environment.gov.au/system/files/resources/c3e20a20-8122-4a9c-bd06-455ea7620380/files/lathamus-dicolor-swift-parrot.pdf
- Saunders D, Margules C and Hill B (1998). *Environmental indicators for national state of the environment reporting: biodiversity*. Australia: State of the Environment (Environmental Indicator Reports), Department of the Environment, Canberra. www.researchgate.net/profile/Denis_Saunders/publication/264534756_Environmental_Indicators_for_National_State_of_the_Environment_Reporting_Biodiversity/links/53e309ee0cf2b9d0d832c8cc/Environmental-Indicators-for-National-State-of-the-Environment-Reporting-Biodiversity.pdf
- Saunders D, Tzaros C, Thurstans S and Webb M (2010). *Background Document – Swift Parrot Recovery Plan*. Department of Environment, Climate Change and Water, Queanbeyan and Birds Australia.
- Scarth P, Armston J and Danaher T (2008). *On the relationship between crown cover, foliage projective cover and leaf area index*. Proceedings of 14th Australasian Remote Sensing and Photogrammetry Conference, Darwin.
- Schirmer J (2018). *Employment in Australia's forest, wood and paper industries*. Report prepared for Forest and Wood Products Australia. FWPA, Melbourne.
- Schirmer J, Yabsley B, Mylek M and Peel D (2016). *Wellbeing, resilience and liveability in rural and regional Australia: The 2015 Regional Wellbeing Survey*. University of Canberra, Canberra.
- Schirmer J, Mylek M, Magnusson A, Yabsley B and Morison J (2017a). *Socio-economic impacts of the forest industry – Western Australia*. University of Canberra, Econsearch, Canberra.
- Schirmer J, Mylek M, Magnusson A, Yabsley B and Morison J (2017b). *Socio-economic impacts of the forest industry – Green Triangle*. University of Canberra, Econsearch, Canberra.
- Schirmer J, Gibbs D, Mylek M, Magnusson A and Morison J (2018a). *Socio-economic impacts of the softwood plantation industry – South West Slopes and Central Tablelands regions, NSW*. University of Canberra, Diana Gibbs and Partners, Econsearch, Canberra.
- Schirmer J, Gibbs D, Mylek M, Magnusson A, Peel D and Morison J (2018b). *Socio-economic impacts of the forest industry – Queensland (2nd edition)*. University of Canberra, Econsearch, Canberra.
- Schirmer J, Mylek M, Magnusson A, Yabsley B and Morison J (2018c). *Socio-economic impacts of the forest industry – Victoria (exc. the Green Triangle)*. University of Canberra, Econsearch, Canberra.
- Schoknecht NR and Pathan S (2013). *Soil groups of Western Australia: a simple guide to the main soils of Western Australia*. 4th edition, Report 380, Department of Agriculture and Food, Western Australia. pp.175.
- Seaton S, Matusick G, Ruthrof K and Hardy G (2015). Outbreak of *Phoracantha semipunctata* in response to severe drought in a Mediterranean eucalyptus forest. *Forests* 6:3868–3881.
- Secretariat of the Convention on Biological Diversity (2005). *Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety*. 3rd edition, Secretariat of the Convention on Biological Diversity, Montreal, Canada.
- SERA (Society for Ecological Restoration Australasia) (2017). *National standards for the practice of ecological restoration in Australia*. Prepared by the Standards Reference Group, Society for Ecological Restoration Australasia in consultation with key partners. 2nd edition, October 2017. www.seraustralasia.com/standards/contents.html
- Sexton TR, Henry RJ, McManus LJ, Henson M, Thomas DS and Shepherd M (2010). Genetic association studies in *Eucalyptus pilularis* Smith (blackbutt). *Australian Forestry* 73:254–258. doi.org/10.1080/00049158.2010.10676336
- Shepherd M and Lee DJ (2016). Gene flow from *Corymbia* hybrids in northern New South Wales. *Forest Ecology and Management* 362:205–217.
- Sheridan GJ, Nyman P, Langhans C, Cawson J, Noske PJ, Oono A, Van der Sant R and Lane PNJ (2015). Is aridity a high-order control on the hydro–geomorphic response of burned landscapes? *International Journal of Wildland Fire* 25:262–267.
- Silver MJ and Carnegie AJ (2017). *An independent review of bell miner associated dieback*. Final report June 2017. Report prepared for the Project Steering Committee: Systematic Review of bell miner associated dieback (BMAD). Office of Environment and Heritage, Sydney, NSW, 125 pp.
- Singh S, Cunningham D, Davidson J, Bush D and Read S (2013). *Status of Australia's Forest Genetic Resources*. ABARES Research Report 13.3, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
- Singh S, Davey S and Cole M (2010). Implications of climate change for forests, vegetation and carbon in Australia. *New Zealand Journal of Forestry Science* 40:141–152.
- Singh S, Senarath U and Read S (2016). *Climatic suitability of Australia's production forests for myrtle rust*. Research Report 16.7, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, 72 pp.
- Skinner A (2002). *The effects of tree isolation on the genetic diversity and seed production of Camden White Gum (Eucalyptus benthamii Maiden et Cambage)*. Centre for Plant Biodiversity Research, Australian National Herbarium. www.anbg.gov.au/cpbr/summer-scholarship/2002-projects/skinner-alison-report.html
- Smethurst PJ, Nambiar EKS, Raison RJ and Moggridge B (2012). *Assessment of Code of Practice for Plantation Forestry: Australian Capital Territory*. CSIRO National, Research Flagships for Sustainable Agriculture. Australian Government Department of Agriculture, Fisheries and Forestry.
- Smith J, Legge S, James A and Tuft K (2016). Optimising camera trap deployment design across multiple sites for species inventory surveys. *Pacific Conservation Biology* 23:43–51. doi.org/10.1071/PC16017
- Somerville D (2010). *Forestry Plantations and Honeybees*. Rural Industries Research and Development Corporation, Canberra.
- South Africa DAFF (Department of Agriculture Forestry and Fishery) (2014). *A profile of the South African macadamia nuts market value chain 2014*. Department of Agriculture, Forestry and Fisheries, Republic of South Africa, Arcadia. www.fao.org/3/a-ax260e.pdf
- Southern SG, MacMillan CP, Bell JC, Bhuiyan N, Dowries G, Ravenwood IC, Joyce KR, Williams D and Thumma BR (2010). Association of allelic variation in xylem genes with wood properties in *Eucalyptus nitens*. *Australian Forestry* 73:259–264. doi.org/10.1080/00049158.2010.10676337

- Sparkes D (2017). *The National Burning Project*. NPA ACT Symposium 2017: Bushfire Management – Balancing the Risks. National Parks Association of the ACT Inc., Canberra. [www.npaact.org.au/res/File/2017/Deb%20Sparkes%20National%20Burning.pdf](http://npaact.org.au/res/File/2017/Deb%20Sparkes%20National%20Burning.pdf)
- Standing Committee of the Australian Forestry Council (1991). *Forest Practices Related to Wood Production in Native Forests: National principles*. From: Attachment A of Commonwealth of Australia (1992) *National Forest Policy Statement: A New Focus for Australia's Forests*, 2nd edition. Commonwealth of Australia, Canberra.
- State of NSW (1999). *Regional Forest Agreement for the Eden region of New South Wales between the Commonwealth of Australia & the State of New South Wales*. www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/nsw-eden/nsw_rfa_eden.pdf
- State of NSW (2000). *Regional Forest Agreement for the North East region of New South Wales between the Commonwealth of Australia & the State of New South Wales*. www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/nsw-north-east/rfa/nsw_ne_rfa.pdf
- State of NSW (2001). *Regional Forest Agreement for Southern New South Wales between the Commonwealth of Australia & the State of New South Wales*. www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/nsw-southern/rfa/nsw_sthn_rfa.pdf
- Stenekes N, Reeve I, Kancans R, Stayner R, Randall L and Lawson K (2012). *Revised indicators of community vulnerability and adaptive capacity across the Murray–Darling Basin: a focus on irrigation in agriculture*. ABARES, Canberra.
- Stojanovic D, Terauds A, Westgate MJ, Webb MH, Roshier D and Heinsohn R (2015). Exploiting the richest patch has a fitness payoff for the migratory swift parrot. *Journal of Animal Ecology* 84:1194–1201. doi.org/10.1111/1365-2656.12375
- Stojanovic D, Webb MH, Alderman R, Porfirio LL and Heinsohn R (2014). Discovery of a novel predator reveals extreme but highly variable mortality for an endangered migratory bird. *Diversity and Distributions* 20:1200–1207. doi.org/10.1111/ddi.12214
- Stojanovic D, Webb MH, Roshier D, Saunders D and Heinsohn R (2012). Ground-based survey methods both overestimate and underestimate the abundance of suitable tree-cavities for the endangered Swift Parrot. *Emu – Austral Ornithology* 112:350–356. doi.org/10.1071/MU11076
- Sullivan AL, McCaw WL, Cruz MG, Matthews S and Ellis PF (2012). Fuel, fire weather and fire behaviour in Australian ecosystems. In: Williams R, Gill AM and Bradstock RA (eds), *Flammable Australia: Fire Regimes, Biodiversity and Ecosystems in a Changing World*, CSIRO Publishing, Chapter 3.
- Sultanbawa Y and Sultanbawa F (2016) (eds). *Australian Native Plants: Cultivation and Uses in the Health and Food Industries*. CRC Press/Taylor & Francis Group, Boca Raton, Florida.
- Sustainability Victoria (2012). *Victorian Recycling Industries Annual Survey 2011–12*. Sustainability Victoria, Melbourne.
- Sustainability Victoria (2015). *Victorian Recycling Industry Annual Report 2014–15*. Sustainability Victoria, Melbourne.
- Sustainability Victoria (2017a). *Investment Factsheet – Timber waste*. www.sustainability.vic.gov.au/-/media/SV/Publications/Business/Investment-facilitation/Waste-material-fact-sheets/Investment-facilitation-factsheet-timber-Oct2016.pdf
- Sustainability Victoria (2017b). *Timber Recycling fund*.
- SVA (Social Ventures Australia) Consulting (2016a). *Consolidated report on Indigenous Protected Areas following Social Return on Investment analyses*. Social Ventures Australia Consulting, Department of the Prime Minister and Cabinet, 51 pp.
- SVA (Social Ventures Australia) Consulting (2016b). *Social Return on Investment analysis of the Warddeken Indigenous Protected Area and associated Indigenous ranger programme*. Report to the Department of the Prime Minister and Cabinet, February 2016. www.pmc.gov.au/sites/default/files/publications/SROI-Consolidated-Report-IPA_1.pdf
- Tan AC, Konczak I, Ramzan I and Sze DM (2011). Potential antioxidant, anti-inflammatory, and proapoptotic anticancer activities of kakadu plum and illawarra plum polyphenolic fractions. *Nutrition and Cancer* 63:1074–1084.
- TFS (Tropical Forestry Services) (2014). *TFS Corporation Ltd Annual Report 2014*. Tropical Forestry Services, Perth.
- Thackway R and Lesslie R (2008). Describing and mapping human-induced vegetation change in the Australian landscape. *Environmental Management* 42:572–590.
- Thavamanikumar S, McManus LJ, Tibbits JFG and Bossinger G (2011). The significance of single nucleotide polymorphisms (SNPs) in *Eucalyptus globulus* breeding programs. *Australian Forestry* 74:23–29. doi.org/10.1080/00049158.2011.10676342
- Thompson D and Connell M (2009). *Issues in Assessing the Sustainability of Private Native Forestry*. Rural Industries Research and Development Corporation, Publication No. 09/031 Project No. CAR-2A, March. www.agrifutures.com.au/wp-content/uploads/publications/09-031.pdf
- Tickle P, Hafner S, Lesslie R, Lindenmayer D, McAlpine C, Mackey B, Norman P and Phinn S (1998). *Scoping Study: Montreal Indicator 1.1.e Fragmentation of Forest Types – Identification of Research Priorities*. Final report to Forest and Wood Products Research and Development Corporation and the Bureau of Resource Sciences, Canberra.
- Timber Queensland (2015). *Timber Plantation Operations Code of Practice for Queensland*. Timber Queensland, Fortitude Valley.
- Tourism NT (2016). *Kakadu Arnhem report period: year ending December 2015*. Northern Territory Tourism.
- Tourism NT (2017). *Kakadu Arnhem report period: year ending March 2017*. Northern Territory Tourism.
- Trewin D and Pink B (2006). *Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006*. Cat. no. 1292.0, ABS, Canberra.
- Trust for Nature (2016). *Annual Report 2015–2016*. Trust for Nature, Melbourne.
- Tulau MJ (2015). *Fire and Soils: A review of the potential impacts of different fire regimes on soil erosion and sedimentation, nutrient and carbon cycling, and impacts on water quantity and quality*. NSW Office of Environment and Heritage, Sydney. www.environment.nsw.gov.au/resources/soils/150623-fire-and-soils.pdf
- Turner J and Lambert M (2005). Expenditure on forest and forest products research in Australia 1981–1982 to 2001–2002. *Australian Forestry* 68:202–210.
- Turner J and Lambert M (2011). Expenditure on forestry and forest products research in Australia 2007–2008. *Australian Forestry* 74:149–155.
- Turner J and Lambert M (2012). *Forestry and Forest Products Research Summary of Changes in Capacity 2008–2011*. FWPA Project Report PRE248–1112, Forest and Wood Products Australia, Melbourne.

- Turner J and Lambert M (2016). Changes in Australian forestry and forest products research for 1985–2013. *Australian Forestry* 79:53–58.
- URS Australia (2015). *Environmental Audit Forest Audit Program 2014*. URS Australia Pty Ltd, Southbank, Victoria www.forestsandreserves.vic.gov.au/_data/assets/pdf_file/0015/31191/Audit-of-harvesting-and-closure-and-regeneration-and-finalisation-2014.pdf
- Van Bueren, Worland T, Svanberg S and Lassen J (2015). *Working for our country: A review of the economic and social benefits of Indigenous land and sea management*. Melbourne, Pew Charitable Trusts and Synergies Economic Consulting: 68 pp.
- Vanclay JK and Turner BJ (2001). *Evaluation of data and methods for estimating the sustainable yield of sawlogs in Victoria*. Department of Natural Resources and Environment, Expert Data Reference Group, Melbourne. www.oren.org.au/issues/forestmanag/Jerryvanclay.pdf
- van Dijk J, Gomboso J and Levantis C (2016). *Australian honey bee industry: 2014–15 survey results*. ABARES research report 16.18, ABARES, Canberra.
- Van Gorsel E, Wolf S, Cleverly J, Isaac P, Haverd V, Ewenz C, Arndt S, Beringer J, Resco de Dios V, Evans BJ, Griebel A, Hutley LB, Keenan T, Kljun N, Macfarlane C, Meyer WS, McHugh I, Pendall E, Prober SM and Silberstein R (2016). Carbon uptake and water use in woodlands and forests in southern Australia during an extreme heat wave event in the “Angry Summer” of 2012/2013. *Biogeosciences* 13:5947–5964.
- VicForests (2011a). *Sustainability Report 2010–11*. VicForests, Melbourne.
- VicForests (2011b). *VicForests 2011 Resource Outlook*. VicForests, Melbourne.
- VicForests (2013). *VicForests 2013 Resource Outlook*. VicForests, Melbourne.
- VicForests (2014). *VicForests 2014 Resource Outlook*. VicForests, Melbourne. www.vicforests.com.au/static/uploads/files/resource-outlook-2014-v4-1-final-wflqdiojpmqi.pdf
- VicForests (2016a). *Annual report 2015–16*. VicForests, Melbourne.
- VicForests (2016b). *Sustainability Report 2015–16*. VicForests, Melbourne.
- VicForests (2017). *2016–2017 Resource Outlook*. VicForests, Melbourne. www.vicforests.com.au/planning-1/resource-outlook-2017
- Victorian Auditor-General (2013). *Managing Victoria’s Native Forest Timber Resources*. Victorian Auditor-General Office, Melbourne, December. www.audit.vic.gov.au/sites/default/files/20131211-Timber-Resources.pdf
- Wallace HM and Leonhardt SD (2015). Do Hybrid Trees Inherit Invasive Characteristics? Fruits of *Corymbia torelliana* X *C. citriodora* Hybrids and Potential for Seed Dispersal by Bees. *PLoS One* 10:e0138868.
- Walsh P (2017). *Sediment and Wood Dynamics in Ephemeral Headwater Channels in Forests Managed for Timber Production in NSW*. PhD Thesis. The Australian National University.
- Wang X, Padgett JM, De la Cruz FB and Barlaz MA (2011). Wood biodegradation in laboratory-scale landfills. *Environmental Science and Technology* 45:6864–6871.
- Webb AA (2009). Streamflow response to *Pinus* plantation harvesting: Canobolas State Forest, southeastern Australia. *Hydrological Processes* 23:1679–1689.
- Webb AA and Hanson IL (2013). Road to stream connectivity: implications for forest water quality in a sub-tropical climate. *British Journal of Environment & Climate Change* 3:197–214.
- Webb AA and Jarrett BW (2013). Hydrological response to wildfire, integrated logging and dry mixed species eucalypt forest regeneration: The Yambulla experiment. *Forest Ecology and Management* 306:107–117.
- Webb AA, Dragovich D and Jamshidi R (2012b). Temporary increases in suspended sediment yields following selective eucalypt forest harvesting. *Forest Ecology and Management* 283:96–105.
- Webb AA, Kathuria A and Turner L (2012a). Longer-term changes in streamflow following logging and mixed species eucalypt forest regeneration: The Karuah experiment. *Journal of Hydrology* 464–465:412–422.
- Webb M (2008). *Swift Parrot Breeding Season Survey Report – 2007/08*. Department of Primary Industries, Parks, Water and Environment. Hobart. dpi.pwe.tas.gov.au/Documents/Swift-Parrot-breeding-season-survey.pdf
- Webb M, Terauds A, Tulloch A, Bell P, Stojanovic D and Heinsohn R (2017). The importance of incorporating functional habitats into conservation planning for highly mobile species in dynamic systems. *Conservation Biology* 31:1018–1028. doi.org/10.1111/cobi.12899
- Webb M, Wotherspoon S, Stojanovic D, Heinsohn R, Cunningham R, Bell P and Terauds A (2014). Location matters: using spatially explicit occupancy models to predict the distribution of the highly mobile, endangered swift parrot. *Biological Conservation* 176:99–108. doi.org/10.1016/j.biocon.2014.05.017
- Wentworth Group of Concerned Scientists (2017). *Accounting for Nature, a scientific method for constructing environmental asset condition accounts*. February 2017. Wentworth Group of Concerned Scientists, Sydney.
- West PW (2011). *National mapping of the abundance of established, new and emerging pest animals to improve decision-making and the assessment of government investment programs. Stage 1: Pest animals*. Final report to the Australian Bureau of Agricultural and Resource Economics and Sciences, Department of Agriculture, Fisheries and Forestry. NSW Department of Primary Industries, Sydney, 63 pp.
- Western Australia and Commonwealth of Australia (1999). *Regional Forest Agreement for the South-West Forest Region of Western Australia between the Commonwealth of Australia and the State of Western Australia*. Signed 4 May 1999. www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/wa/rfa/wa_rfa.pdf
- Wharton GS (2009). *The sandalwood industry on Cape York Peninsula from the 1890s to the 1920s*. Professional Historians Association Queensland Conference. St Lucia, Queensland, Australia, University of Queensland.
- Whisson DA, Dixon V, Taylor ML and Melzer A (2016). Failure to respond to food resource decline has catastrophic consequences for koalas in a high-density population in southern Australia. *PLoS One* 11:e0144348.
- Whitehead P, Gorman J, Griffiths A, Wightman G, Massarella H and Altman J (2006). *Feasibility of Small Scale Commercial Native Plant Harvests by Indigenous Communities*. A report for the RIRDC/Land & Water Australia/FWPRDC/MDBC Joint Venture Agroforestry Program. RIRDC Publication No 04/149. Rural Industries Research and Development Corporation, Canberra. www.agrifutures.com.au/wp-content/uploads/publications/04-149.pdf

- White JC, Coops NC, Wulder MA, Vastaranta M, Hilker T and Tompalski P (2016). Remote Sensing Technologies for Enhancing Forest Inventories: A Review. *Canadian Journal of Remote Sensing* 42:619–641.
- Whitford K (2011). *Cording to reduce soil disturbance during timber harvesting*. Information Sheet 43, Department of Environment and Conservation, Western Australia.
- Whitford K (2012). *FORESTCHECK: Monitoring soil disturbance caused by timber harvesting in jarrah forest*. Information Sheet 52, Department of Environment and Conservation, Western Australia.
- Wilkinson G (1994). *Native Forest Silviculture Technical Bulletin No. 5, Silvicultural systems*. Division of Silvicultural Research and Development Forestry Commission, Tasmania.
- Wilkinson GR, Schofield M and Kanowski P (2014). Regulating forestry – Experience with compliance and enforcement over the 25 years of Tasmania’s forest practices system. *Forest Policy and Economics* 40:1–11.
- Williams DJ, Edwards D, Pun S, Chaliha M and Sultanbawa Y (2014). Profiling ellagic acid content: The importance of form and ascorbic acid levels. *Food Research International* 66:100–106. doi.org/10.1016/j.foodres.2014.09.003
- Williams KJ, Prober SM, Harwood CD, Doerr VAJ, Jeanneret T, Manion G and Ferrier S (2015). *Implications of Climate Change for Biodiversity: A community-level modelling approach*. CSIRO Land and Water Flagship, Canberra, 87 pp. adaptnrm.csiro.au/biodiversity-impacts/
- Wills A and Farr J (2016). Gumleaf skeletoniser *Uraba lugens* (Lepidoptera: Nolidae) larval outbreaks occur in high rainfall Western Australian jarrah (*Eucalyptus marginata*) forest after drought. *Austral Entomology* 56:424–432.
- Wilson D (1969). *Compendium of Australian forest products statistics 1935–36 to 1966–67*. Department of National Development, Forestry and Timber Bureau, Canberra.
- Wilson J (2012). *Private forest resourcing model 2012: Where are the best locations for a hypothetical Tasmanian wood processing plant?* Private Forests Tasmania, Hobart. www.pft.tas.gov.au/_data/assets/pdf_file/0005/131945/Private_Forest_Resourcing_Model_2012.pdf
- Wishart J and Cox T (2016). *Rollout of RHDV1 K5 in Australia: information guide*. In: PestSmart Toolkit publication, second edition. Invasive Animals Cooperative Research Centre, Canberra, 52 pp.
- Woinarski JCZ, Garnett ST, Legge SM and Lindenmayer DB (2017). The contribution of policy, law, management, research, and advocacy failings to the recent extinctions of three Australian vertebrate species. *Conservation Biology* 31:13–23. doi.org/10.1111/cobi.12852
- Worboys GL (2015). *Concept, purpose and challenges*. In: Worboys GL, Lockwood M, Kothari A, Feary S and Pulsford I (eds), *Protected Area Governance and Management*. Australian National University Press, Canberra, pp.9–42.
- World Bank (2017). *Doing Business – Measuring business regulations: Economy rankings*. www.doingbusiness.org/rankings
- Ximenes F, Bi H, Cameron N, Coburn R, Maclean M, Sargeant D, Mo M, Roxburgh S, Ryan M, Williams J and Boer K (2016) *Carbon stocks and flows in native forests and harvested wood products in SE Australia*. Forest & Wood Products Australia. Project No: PNC285-1112. www.fwpa.com.au/images/resources/Amended_Final_report_C_native_forests_PNC285-1112.pdf
- Zed PG and Zed CA (2017). *FWPA Australian Timber Industry Investment Review*. Forest and Wood Products Australia Report by Omega Consulting. Forest Wood Products of Australia, Melbourne.
- Zeeman BJ, Lunt ID and Morgan JW (2014). Can severe drought reverse woody plant encroachment in a temperate Australian woodland? *Journal of Vegetation Science* 25:928–936.
- Zhang L, Zhao FF, Chen Y and Dixon RNM (2011). Estimating effects of plantation expansion and climate variability on streamflow for catchments in Australia. *Water Resources Research* 47, W12539. doi.org/10.1029/2011WR010711
- Zhang L, Zhao FF and Brown AE (2012). Predicting effects of plantation expansion on streamflow regime for catchments in Australia. *Hydrology and Earth System Sciences* 16:2109–2121.

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