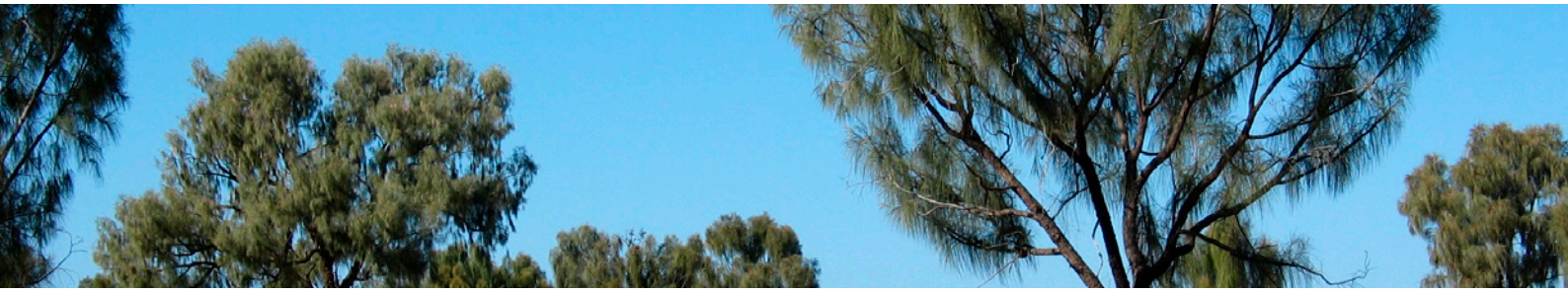
Australian Government
Department of the Environment and Energy



NVIS Fact sheet
MVG 31– Other open woodlands

Australia's native vegetation is a rich and fundamental element of our natural heritage. It binds and nourishes our ancient soils; shelters and sustains wildlife, protects streams, wetlands, estuaries, and coastlines; and absorbs carbon dioxide while emitting oxygen. The National Vegetation Information System (NVIS) has been developed and maintained by all Australian governments to provide a national picture that captures and explains the broad diversity of our native vegetation.

This is part of a series of fact sheets which the Australian Government developed based on NVIS Version 4.2 data to provide detailed descriptions of the major vegetation groups (MVGs) and other MVG types. The series is comprised of a fact sheet for each of the 25 MVGs to inform their use by planners and policy makers. An additional eight MVGs are available outlining other MVG types.

For more information on these fact sheets, including its limitations and caveats related to its use, please see: 'Introduction to the Major Vegetation Group (MVG) fact sheets'.

Overview

Typically, vegetation areas classified under MVG 31 – Other open woodlands:

- include a range of vegetation types dominated by a sparse layer of trees from genera other than *Eucalyptus* or *Acacia*, including open structural forms of vegetation types assigned to MVGs 7, 8 and 9
- have dominant species that most commonly belong to the genera *Allocasuarina, Casuarina, Callitris* or *Melaleuca,* but may extend to other genera such as *Adansonia, Alectryon, Callistemon, Grevillea, Lysiphyllum, Lophostemon, Terminalia*, etc
- occur throughout Australia in arid, semi-arid and monsoonal climates in a range of upland, lowland and wetland landscapes
- include a range of fire-prone and some largely non-flammable vegetation types.

Desert oak (*Allocasuarina decaisneana*) open woodland, south-west of Alice Springs, NT (Photo: T. Rosling)

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Facts and figures

Major Vegetation Group	MVG 31 - Other open woodlands
Major Vegetation Subgroups	70. Callitris open woodlands 71. Casuarina and Allocasuarina open woodlands with a tussock grass understorey 72. Casuarina and Allocasuarina open woodlands with a hummock grass understorey 73. Casuarina and Allocasuarina open woodlands with a chenopod shrub understorey 74. Casuarina and Allocasuarina open woodlands with a shrubby understorey 75. Melaleuca open woodlands 79. Other open woodlands
Typical NVIS structural formations	Open woodland (mid, low)
Number of IBRA regions	57
Most extensive in IBRA region (Est. pre-1750 and Present)	Great Sandy Desert (WA and NT)
Estimated pre-1750 extent (km²)	174 518
Present extent (km²)	169 606
Area protected (km²)	28 046

Adansonia gregorii (baobab) low open woodland, east of Derby, WA (Photo: T. Rosling)

Structure and physiognomy

- Form open woodlands of scattered trees approximately 10 – 25 m tall with crown cover < 20 per cent (projected foliage cover <10 per cent).
- Include a diverse range of understorey types that may include a dense or open layer of shrubs, ephemeral or perennial tussock grasses, hummock grasses, chenopods or forbs.

Indicative flora

- Dominant overstorey species generally consist of *Callitris, Casuarina, Allocasuarina* and *Melaleuca*, with crown cover <20 per cent , but may also be dominated by other less common genera such as *Adansonia, Alectryon, Callistemon, Grevillea, Lysiphyllum, Lophostemon* and *Terminalia*.
- Example communities that may fall under this MVG include:
  - *Allocasuarina* open woodlands dominated by monospecific stands of *A. decaisneana* (Desert Oak), a slow growing tree that remains a small narrow shrubby plant for many years while establishing a deep root system, before developing into a large spreading tree. An open layer of shrubs typically includes species of *Acacia, Canthium, Dodonaea, Eremophila, Grevillea, Senna* and *Thryptomene*. The ground layer is dominated by hummock grasses, particularly *Triodia basedowii, T. pungens* and *T. schinzii*, with a range of ephemeral forbs and grasses including species of the *Asteraceae* family and *Aristida*.
  - *Casuarina* open woodlands such as those dominated by *C. pauper* found on calcareous sandplains around western NSW, eastern South Australia and north-western Victoria; usually occur in pure stands (though may co-occur and hybridise with *C. cristata* in the north-east of its range), often with a subcanopy of *Alectryon oleifolius*. Understoreys are often dominated by chenopod shrubs and forbs including species of *Maireana, Chenopodium Enchylaena, Rhagodia* and *Sclerolaena*. Shrub genera such as *Eremophila, Exocarpos, Geijera* and *Olearia* dominate other stands. The ground layer includes ephemeral species of *Asteraceae* and *Zygophyllum* with tussocks of *Austrostipa*, *Chloris, Enneapogon* and *Sporobolus*.
  - *Callitris* open woodlands, like MVG 7, are most commonly dominated by *C. glaucophylla* sometimes co-occurring with *Eucalyptus populnea* or other members of section *Adnataria* within subgenus *Symphyomyrtus* of *Eucalyptus*. Associated shrub species include *Acacia, Eremophila, Senna, Dodonaea*; chenopods such as *Atriplex, Maireana* and *Sclerolaena*; and tussock grasses such as *Cymbopogon, Eragrostis, Aristida, Chloris* and *Austrostipa*.
  - *Melaleuca viridiflora* in Melaleuca open woodlands is found in pure stands or sometimes with *Melaleuca citrolens, M. foliolosa, M. stenostachya, M. acacioides, M. tamariscina or M. monantha*. Emergent trees may include species of *Corymbia*, *Eucalyptus* and *Terminalia* and there may be scattered shrubs of *Grevillea, Petalostigma* or *Acacia* species. The ground layer includes species of the graminoids *Digitaria, Aristida, Fimbristylis, Eragrostis, Eriachne, Panicum, Rhynchospora, Themeda, Schizachyrium* and *Heteropogon*. Forbs include species of *Cheilanthes, Spermacoce, Phyllanthus, Drosera, Rhynchosia, Desmodium* and *Xyris*.
  - Other examples of open woodland communities include the Baobab (Boab) (*Adansonia gregorii*) open woodlands of tropical Northern Australia, and the Pencil Pine (*Athrotaxis cupressoides*) open woodlands of Tasmania's subalpine regions.

Casuarina open woodland (*Casuarina pauper*) with tussock grass understorey, western NSW (B. Pellow)

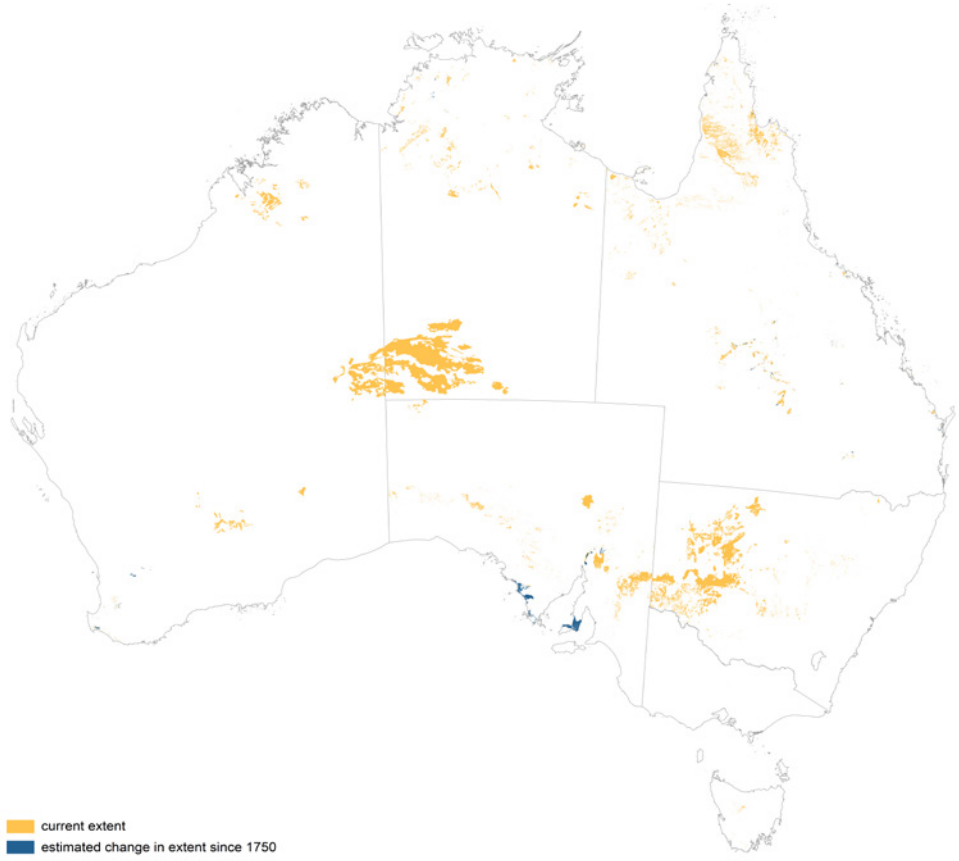
Environment

- Occur throughout Australia in arid, semi-arid and monsoonal climates in a range of upland, lowland and wetland landscapes.
- May occur as a mosaic woodland between sand dunes or on sand plains.

Geography

- This MVG is predominantly scattered throughout arid, semi-arid and tropical Australia, with occurrences in all states and territories except the ACT.
- *Allocasuarina and Casuarina* open woodlands occur within an extensive area of central Australia spanning the Northern Territory – Western Australian border, and extending into south-central Western Australia, South Australia and east into New South Wales. Also occurs in Queensland along the coast (NVIS Version 4.2).
- *Callitris* open woodlands typically occur in central and western New South Wales, southern parts of South Australia, and small pockets in Victoria and Queensland. *Callitris* in Western Australia and Tasmania generally occurs as MVG 7 (>20 per cent crown cover).
- *Melaleuca* open woodlands are found in tropical Queensland and the Northern Territory, with smaller distributions in Western Australia and South Australia.
- Other open woodlands dominated by other genera, occur across the tropical latitudes (northern Western Australia and Northern Territory) down through central Queensland with small areas in South Australia and Tasmania.

The below image outlines the location of this MVG group in Australia.



Change

- Approximately three per cent (4 900 km^2) of the estimated pre-1750 extent cleared accounting for 1.5 per cent of total clearing in Australia.
- Species composition and vegetation structure has been affected by overgrazing through much of the distribution, especially in arid and semi-arid regions.
- May be affected by changed fire regimes, except in woodlands on calcareous sandplains, which are rarely fire-prone.
- Grazing of post-fire regrowth has curtailed regeneration of woody species and prolonged exposure of soils to erosive winds, particularly in Allocasuarina open woodlands and Callitris open woodlands.

Key values

- Biodiversity.
- Support a wide range of vertebrate and invertebrate species.
- Scenic values, especially where large trees occur in desert landscapes.
- Cultural significance to indigenous people.

List of key management issues

- Changes to fire regime.
- Grazing by livestock and feral herbivores (rabbits, goats, camels), especially after recent fire.
- Long-term monitoring to inform future management strategies.

References

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Data sources

Interim Biogeographic Regionalisation for Australia (IBRA), Version 7.

National Vegetation Information System, Version 4.2.

Collaborative Australian Protected Areas Database – CAPAD 2014 – Terrestrial.

Notes

- This fact sheet should be read in conjunction with MVG 7: Callitris forests and woodlands, MVG 8: Casuarina forests and woodlands, MVG 9 Melaleuca forests and woodlands and MVG 10: Other forests and woodlands.