



Arnhem Coast bioregion

Description

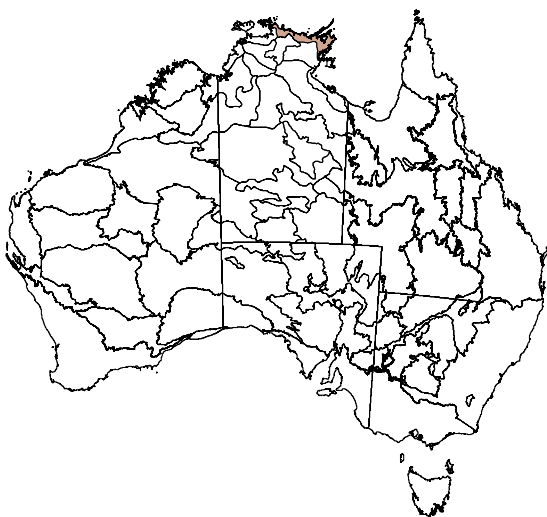
Area: 29 900 km²

The Arnhem Coast bioregion includes coastal plains of sandy beaches and many offshore islands. The vegetation is characterised by eucalypt woodlands, monsoon vine forests and coastal communities, such as mangroves. The bioregion is entirely Aboriginal land. Land use includes bauxite and manganese mining, and tourism. Nhulunbuy is the only major population centre.

Location

The Arnhem Coast bioregion is located on the coast of the Northern Territory (see Figure 1).

Figure 1 Location of the Arnhem Coast bioregion



Data sources available

Site-based monitoring data are not available.

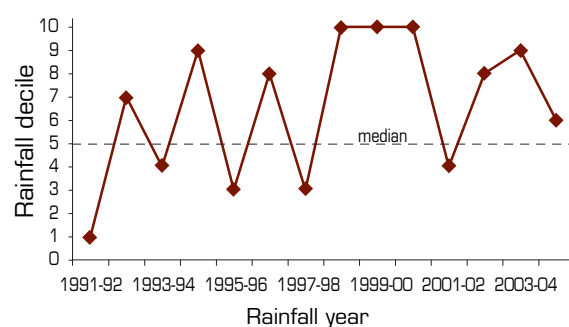
Other datasets include:

- fire extent, intensity and frequency, which provides high reliability for reporting change
- dust
- distribution and relative abundance of invasive animals and weeds
- land use.

Climate

The Arnhem Coast bioregion has a tropical monsoonal climate with a distinct wet and dry season, and high temperatures throughout the year. The spatially averaged median (for the period 1890–2005) rainfall is 1223 mm (April to March rainfall year; see Figure 2).

Figure 2 Decile rainfall for the period 1991–1992 to 2004–2005



Annual rainfall is for the 12-month period 1 April to 31 March.



Seasonal quality based on decile rainfall was above average for much of the 1992–2005 period. The year 1991–1992 was very dry, and the period from 1998–1999 to 2000–2001 was exceptionally wet. The intense nature of monsoonal rainfall probably means that the spatially averaged rainfall reported here conceals local variability across the Arnhem Coast bioregion.

Landscape function

There are no suitable data for reporting change in landscape function.

Sustainable management

Critical stock forage

There are no suitable data for reporting change in critical stock forage.

Plant species richness

There are no suitable data to report change in plant species richness.

Change in woody cover

Based on the Australian Greenhouse Office definition and mapping of forest cover¹, forest cover in the bioregion is extensive and decreased by a small amount in the 1991–2004 period. In 1991, it covered 77.80% of the bioregion area, while by 2004 this had decreased to 72.20% — a decrease of 5.60%. There is complete coverage of Landsat imagery available to support this result.

Distance from stock water

The Arnhem Coast bioregion is not commercially grazed, and sources of stock water (other than natural sources) are unlikely to be present. Distance from stock water has not been calculated for this bioregion.

Weeds

Weeds known to occur in the Arnhem Coast bioregion are:

Common name	Scientific name
Bellyache bush	<i>Jatropha gossypifolia</i>
Creeping lantana	<i>Lantana montevidensis</i>
Grader grass	<i>Themeda quadrivalvis</i>
Hymenachne	<i>Hymenachne amplexicaulis</i>
Hyptis	<i>Hyptis suaveolens</i>
Lantana	<i>Lantana camara</i>
Mesquite	<i>Prosopis</i> spp.
Mimosa	<i>Mimosa pigra</i>
Mission grass	<i>Pennisetum polystachion</i>
Pond apple	<i>Annona glabra</i>
<i>Salvinia molesta</i>	<i>Salvinia molesta</i>
Sicklepod	<i>Senna obtusifolia</i> and <i>S. tora</i>
<i>Sida</i>	<i>Sida</i> spp.
Snake weed	<i>Stachylarpheta</i> spp.

See www.anra.gov.au for distribution maps

Components of total grazing pressure

Domestic stocking density

The Arnhem Coast bioregion is not used for pastoralism, and there are no data to report.

Kangaroos

There are no suitable data to report change in kangaroo populations.

¹ See <http://www.greenhouse.gov.au/ncas/reports/tech09.html>

Invasive animals

Invasive animal species known to occur in the Arnhem Coast bioregion include:

Common name	Scientific name
Feral pig	<i>Sus scrofa</i>
Deer	<i>Cervidae</i> family
Wild dog	<i>Canis</i> spp.
Feral cat	<i>Felis catus</i>
Cane toad	<i>Bufo marinus</i>
Water buffalo	<i>Bubalus bubalis</i>
Horse	<i>Equus caballus</i>

See www.anra.gov.au for distribution maps

Products that support reporting of landscape function and sustainable management

Fire

Annual extensive fires are a feature of this bioregion, although the percentage of area burnt each year between 1997 and 2005 varied (44.4% in 1999 compared with 12.6% in 2005). During this period, the late dry-season (and likely more intense) fires were far more extensive than the early dry-season fires in all years (in one case as much as 11 times the area was burnt in the late dry season in 2001).

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005
% area burnt	33.3	25.8	44.4	27.9	33.3	32.4	22.4	31.0	12.6

The frequency of fire during the reporting period was high compared with all rangeland bioregions, with a mean frequency (\log_{10} transformed) of 0.51.

Dust

The mean Dust Storm Index value (1992–2005) was 0.48, which is low when compared with other rangeland bioregions. Dust levels were low in the centre of the bioregion and negligible elsewhere.

Biodiversity

By 2005, the following had been recorded for the Arnhem Coast bioregion:

- approximately 275 bird species (Biodiversity Working Group indicator: Fauna surveys; see **Section 7 of Chapter 3** of *Rangelands 2008 — Taking the Pulse*)
- approximately 2000 plant taxa (Biodiversity Working Group indicator: Flora surveys).

There are (Biodiversity Working Group indicator: Threatened species):

- 1 threatened plant species
- 5 threatened mammal species
- 4 threatened bird species
- 5 threatened reptile species
- 1 threatened fish species.

Socioeconomic characteristics

Land use and value

This bioregion is not used for pastoralism, and land values cannot be reported.

Key management issues and features

Key issues and features of the Arnhem Coast bioregion are:

- the control and management of fire activity within the region, in particular the intensity and frequency of late dry-season burns within the region
- the control and management of feral animals, including buffalo, pigs and cattle.