Tiwi Cobourg bioregion

Description

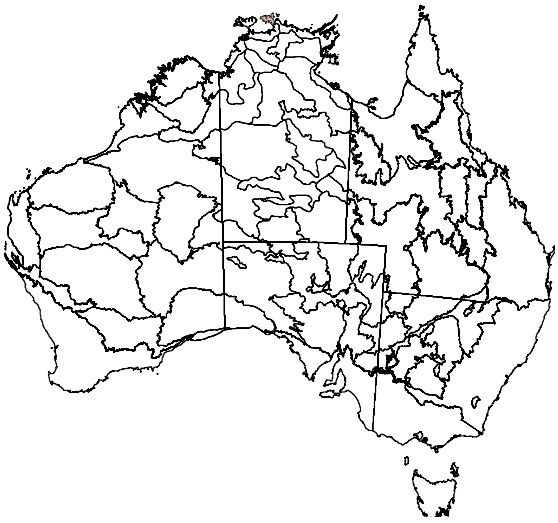
Area: 2513 km^2

The Tiwi Cobourg bioregion is characterised by plains and coastal dunes. Predominant vegetation communities are eucalypt forest and woodlands with tussock and hummock grass understorey. The land is mostly occupied by Aboriginal communities. The main industries are tourism and aquaculture. There are a number of small Aboriginal communities, with Minjilang being the largest population centre.

Location

The Tiwi Cobourg bioregion is located on the top-end coast of the Northern Territory (NT; see Figure 1).

Figure 1 Location of the Tiwi Cobourg bioregion



Data sources available

Site-based monitoring data are not available.

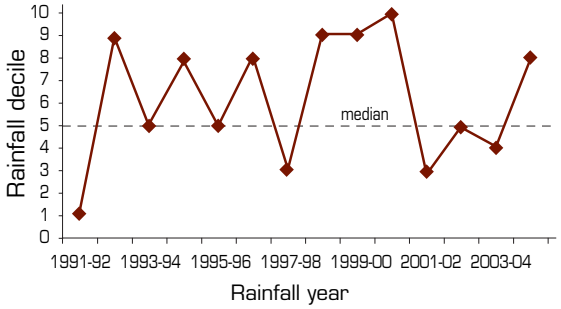
Other datasets include:

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

Climate

The Tiwi Cobourg bioregion has a tropical monsoonal climate, with a distinct wet season and high temperatures throughout the year. Spatially averaged median (1890–2005) rainfall is 1294 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.

Decile rainfall was variable, but generally above average, throughout the reporting period. The year 1991–1992 was notably dry, while 1992–1993 and the 1998–1999 to 2000–2001 period were wetter years.

The Tiwi Cobourg bioregion is small. Nevertheless, the intense nature of monsoonal rainfall may mean that the spatially averaged rainfall reported here has concealed local variability in ***seasonal quality*** across the 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 for reporting change in plant species richness.

Change in woody cover

Based on the Australian Greenhouse Office definition and mapping of forest extent[1], forest is extensive in the Tiwi Cobourg bioregion and there was a very small decrease in forested area between 1991 and 2004. Forest occupied 90.33% of the bioregion in 1991, decreasing by 0.67% to 89.66% in 2004. There is complete Landsat coverage for reporting this result.

Distance from stock water

The Tiwi Cobourg 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.

Weeds

Weeds known to occur in the Tiwi Cobourg bioregion include:

Common name	Scientific name
Hyptis	*Hyptis suaveolens*
Mission grass	*Pennisetum polystachion*
Sida spp.	*Sida* spp.
Snake weed	*Stachylarpheta* spp.

See www.anra.gov.au for distribution maps

[1] See http://www.greenhouse.gov.au/ncas/reports/tech09.html

Components of total grazing pressure

Domestic stocking density

There is no commercial grazing of domestic stock in the bioregion.

Kangaroos

There are no suitable data for reporting change in kangaroo populations.

Invasive animals

Invasive animal species known to occur in the Tiwi Cobourg bioregion include:

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

See www.anra.gov.au for distribution maps

Products that support reporting of landscape function and sustainable management

Fire

Considerable areas of the Tiwi Cobourg bioregion burnt in all years between 1997 and 2005, apart from 2004. The reduced fire extent in that year may have resulted from reduced rainfall in the two preceding years (see Figure 2, above).

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005
% area burnt	24.1	16.9	36.0	14.7	24.4	19.4	9.3	3.9	21.1

Hot (late-dry-season) fires were predominant in all years apart from 2005 (when 65% of the area burnt in the early dry season).

Fire frequency between 1997 and 2005 was moderate compared with all rangeland bioregions, with a mean frequency (log_{10} transformed) of 0.38.

Dust

There are no data for reporting dust.

Biodiversity

By 2005, in the Tiwi Cobourg bioregion, there were:

- 246 bird species recorded (Biodiversity Working Group indicator: Fauna surveys; see **Section 7 of Chapter 3** of *Rangelands 2008 — Taking the Pulse*)
- more than 1400 plant taxa recorded (Biodiversity Working Group indicator: Flora surveys).

The bioregion also contains Ramsar-listed wetlands (Biodiversity Working Group indicator: Wetlands).

In this bioregion, there are (Biodiversity Working Group indicator: Threatened species):

- 6 threatened plant species
- 3 threatened mammal species
- 6 threatened bird species
- 6 threatened reptile species.

Socioeconomic characteristics

Land use and value

The Tiwi Cobourg bioregion is not used for grazing.

Key management issues and features

Key features and issues of the Tiwi Cobourg bioregion include:

- increased clearing of native vegetation associated with plantation-timber development
- increased fire activity associated with vegetation clearing.