

Savanna regions

Darwin Kakadu region

Introduction - This region includes the coastal country and woodlands stretching from Darwin to Kakadu National Park in the Top End of the Northern Territory. It also includes the coastal region south-west of Darwin and the spectacular escarpment country of Kakadu, Katherine Gorge and western Arnhem Land. Covering slightly more than 100,000 square kilometres, this region is one of the more densely populous of the tropical savannas. It holds the savanna's second-largest city, Darwin. Major income-generating industries are mining and tourism.



Mining and tourism - The Darwin-Kakadu area is one of the most northerly regions of the tropical savannas, meaning periodic summer storms and tropical cyclones deliver most of the annual rain. Average temperatures inland at this time are 36°C with a cooler 33°C or less along the coast. The dry winter season is generally rainless, with mild to warm days. Average minimum temperatures in July are between 15 and 21°C, with the cooler temperatures being experienced inland and to the south.

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Population (2016)

Darwin	136,245
Palmerston	33,695
Katherine	6,094
Jabiru	1,081

Landscapes - The major land uses in terms of area are Aboriginal land, pastoralism and nature reserves. This region has a relatively high proportion of nature reserve area because of the large size of Kakadu National Park.



Arnhem Land

Introduction - This region of around 70,000 square kilometres covers the low-lying parts of Arnhem Land in the Top End of the Northern Territory, east of the stony escarpment. (Note that this landscape-defined region is smaller than Arnhem Land proper which extends further west to Kakadu National Park and further south-east towards the community of Ngukurr.)

The region is almost all Aboriginal land, although it has some areas leased for other purposes - such as Gurig (Coburg) National Park and the mining operations near Nuhlunbuy (Gove) and on Groote Eylandt.



There is also a small area of pastoral land in Central Arnhem. However, the Aboriginal land, together with the neighbouring Kakadu National Park, forms the largest block of land not given over to cattle grazing in the tropical savannas.

Climate - This region's tropical climate is characterised by hot, wet, humid summers and mild, drier winters, partly due to its proximity to the coast. Monsoons deliver most of the region's average annual rainfall of 800-1600 mm per year. The temperature during summer gets up to around 33°C, but winter only goes as low as 15-20°C. It is coolest further inland, usually on cloudless nights.

Population snapshot - In 2016, there were approximately 16,000 people living in Arnhem Land. About three-quarters of these were Yolngu people.

Gulf country

Introduction - The Gulf Country covers the southern shores of the Gulf of Carpentaria, the rivers that flow into it, and the surrounding land. It includes the ridged landscapes surrounding Mount Isa. This is the largest of the tropical savanna regions, as we have defined them, covering around 425,000 square kilometres.

Land use - The major land use in the region is pastoralism, although most income is generated by mining, with several large mines in the region, such as the Mount Isa copper mine and the McArthur River and Century lead-zinc mines. The fishing industry is also a major employer in the region. There are some national parks in the Queensland areas and significant Aboriginal lands in the Northern Territory region.



Climate - Average summer rainfall ranges between 400 mm in the south to 800 mm in the coastal north. Temperatures are hot, with maximums around 36°C; however, more frequent mild weather is recorded in the far north coastal sections and the eastern areas in Queensland. Winter temperatures can drop after warm, sunny days to an average overnight low of 12°C.



Cape York Peninsula

Introduction - This region covers Cape York Peninsula in far north Queensland. It has spectacular natural landscapes, numerous pastoral leases and Aboriginal communities, as well as a large bauxite mine at Weipa. It covers an area of 115,000 square kilometres and has a relatively large area set aside for conservation. However, pastoralism is the dominant land use.

Climate - Wet seasons are hot and humid, with maximum temperatures around 33–36°C in January. During the wet season, this region is one of the cloudiest of the savannas, even though there is an average of seven to eight hours of sunshine each day. Rainfall ranges from an annual average of 1,500 to 2,500 mm. Dry-season rainfall can be associated with the moist trade winds being uplifted over the coast. Temperatures are moderate in the dry seasons, with July average minimums dropping to 21°C in the north and 15°C in the southern inland areas.

Land use - Pastoralism is the dominant land use throughout the region, however, there are significant areas of nature conservation, Aboriginal land use and forestry.

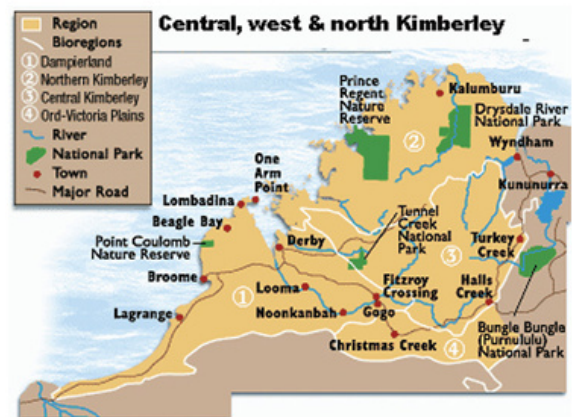


Central, North and West Kimberley

Introduction - This is an area of around 300,000 square kilometres, covering only the central, northern and western parts of the Kimberley. This country features the spectacular rocky gorges and ridges of the north, which grade into flatter cattle country in the south and west. The east Kimberley region around Kununurra, with its grassy plains and smaller areas of rocky country, has more in common with landscapes across the border in the Northern Territory, and is included in the VRD-Sturt region.

Climate - The summer wet season usually occurs from November to April and is characterised by hot humid conditions, predominantly north-west winds and frequent thunderstorms. It can get hot here - average maximum temperatures exceed 35°C in inland regions, but are moderate along the coast in the early months of the wet season. From May to October the Kimberley experiences its dry season, usually with cloudless skies.

Land use - Most of the region is pastoral land with significant though lesser areas of Aboriginal land, nature reserves, vacant Crown land and Defence Force land.



Population snapshot - The Kimberley has a high Indigenous population, forming around a third of the total population, which includes tourists. If we only considered long-term residents of the region, the percentage would probably be much higher.

Economic profile - The major economic contributors in the Kimberley are tourism, agriculture, mining and pearling. The income from mining is more than double any of the others, most of which comes from the Argyle diamond mine, south west of Kununurra. There are 182 agricultural holdings, covering an area of 24,600 square kilometres. Most of these crops are broad acre crops, like sugar, grown in the Ord River Irrigation Area near Kununurra. Note that while Kununurra is outside of the three bioregions that make up the Kimberley, regional economic profiles of the area tend to incorporate industries around this town.

Beef production - The Kimberley pastoral industry is based on rangeland production of beef cattle. There are 98 pastoral leases covering around 23 million hectares, about half of the region's total area. As there are no meat processing plants in the area, cattle are exported live or sold as stores.

Pearls - The Kimberley's pearling industry has become Western Australia's most lucrative aquaculture industry.

Tourism - In 2017, there were 593,000 visitors to the Kimberley. There is a general expectation that this industry will increase the contribution it makes to the region. July and August are the peak months for visitors, but recent campaigns have been attempting to attract people during the tropical summer, between October and May.

Mitchell Grasslands

Landscapes and grazing - This large region of 320,000 square kilometres stretches north-west from the Desert Uplands region of Queensland across into the Northern Territory. It is dominated by the largely treeless plains of Mitchell Grass (grasses of the genus *A. strebla*). The land area in this region is almost totally given over to pastoralism - unsurprisingly, as the region is defined by a grass type that is good for grazing cattle.



Cattle culture - The sparse population is distributed in towns that support the cattle industry like Longreach and Camooweal in Queensland, and Elliott in the Northern Territory. Even other significant industries in the area like tourism utilise the cattle station culture, as seen in the Longreach Hall of Fame.

Climate - The Mitchell Grasslands is the only landlocked region of the tropical savannas, and is also the driest. Annual rainfall averages range from 600 mm in the north to less than 400 mm in the south. The region's hottest temperatures occur pre-wet season; the slightly cooler January temperatures range between 36°C and 39°C, when cloud cover and rain are most frequent. During the longer winter dry season, minimum temperatures range between 9°C and 12°C, meaning frosts are possible in the far south-east sector on clear nights.



Land use - Most of the region is pastoral land with significant though lesser areas of Aboriginal land, nature reserves, vacant Crown land and Defence Force land.

Ord River, Victoria River District, Sturt Plateau

Introduction - The Ord River, Victoria River District and Sturt Plateau region covers around 270,000 square kilometres of the country south of Katherine, straddling the border between the Northern Territory and Western Australia. To the west it features much of the Ord River catchment and the spectacular rocky bluffs characteristic of the Kimberley, such as the Bungle Bungle area. Its central parts feature the Victoria River catchment, while its eastern end is dominated by the Sturt Plateau and the flatter grassy plains of the Barkly. The southern parts grade into the Tanami Desert.



Climate - The VRD-Sturt region, like most of the tropical savannas, has a tropical climate with hot, wet, humid summers and sunny, warm, dry winters. It comes under very little coastal climatic influence - it is less humid and cloudy than coastal areas. Wet season conditions are generally hot, with average maximum temperatures reaching 36°C. Annual rainfall totals range from less than 600 mm in the south to around twice that in the north. The dry season is more prolonged than the wet season, and is dominated by the south-east trade winds, with an average minimum of about 12°C.

Land use - The major land use is cattle grazing, and in the western areas there are significant national parks and horticulture. The district supports some of the longest settled and most successful grazing enterprises in northern Australia. However, the region has not avoided problems of land degradation, and over several decades governments have supported local research to improve sustainable production systems.

In addition to cattle grazing, there are smaller areas of Aboriginal land, nature reserves and vacant Crown land, as well as significant blocks of Defence Force land. The southern parts of the region border very large areas of Aboriginal land in the Tanami Desert.

North East Queensland

Introduction - This region covers the savanna country in north-east Queensland, lying inland from Cooktown in the north to Rockhampton in the south. It covers around 310,000 square kilometres and does not include the rainforest areas of the wet tropics and the central Mackay coast. Land use is dominated by pastoralism and includes major beef cattle areas in its southern parts. It is the most populous of the eight tropical savanna regions, with many towns, including Townsville, Chillagoe, Charters Towers and Emerald.



Climate - The north-east Queensland region of the tropical savannas has high rainfall summers and drier winters, and lies in a tropical climatic zone, with its southern extent adjacent to the sub-tropics. Hot, summer days in January reach an average temperature of 33°C to 36°C. Rainfall is more intense in summer than winter, and extensive falls can occur in association with the passage of tropical cyclones across the coast. Annual average totals diminish from north to south, and with distance from the coast and range from 1200 mm to as low as 400 mm in the south-west. Drought conditions occur more frequently inland, but the whole area has a moderate to high variability in rainfall. In July the average overnight minimum temperatures are between 9°C and 18°C.

Land use - Pastoralism is by far the most dominant land use throughout the region, with small areas of nature reserve and vacant Crown land.