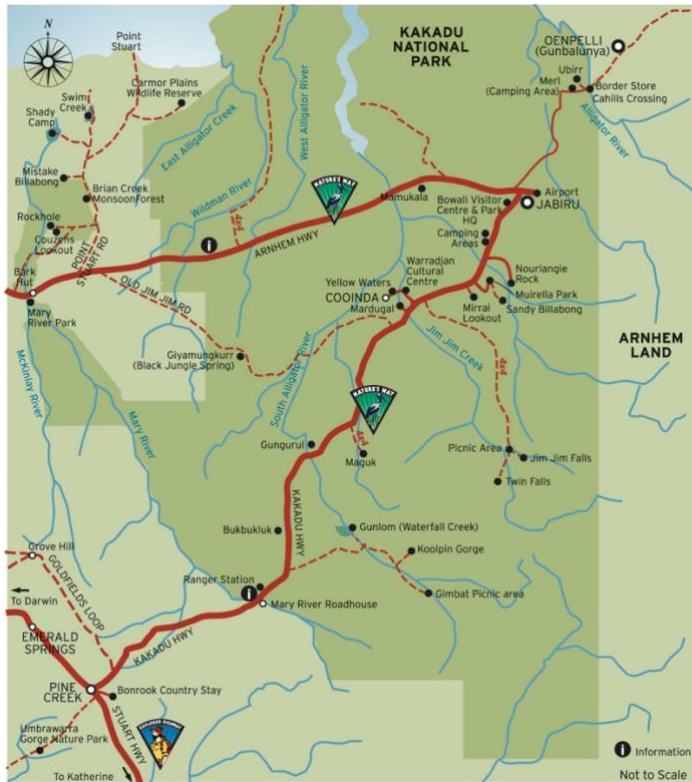


APPENDIX 1: KAKADU WETLANDS

Source 1: Kakadu National Park Tourist map



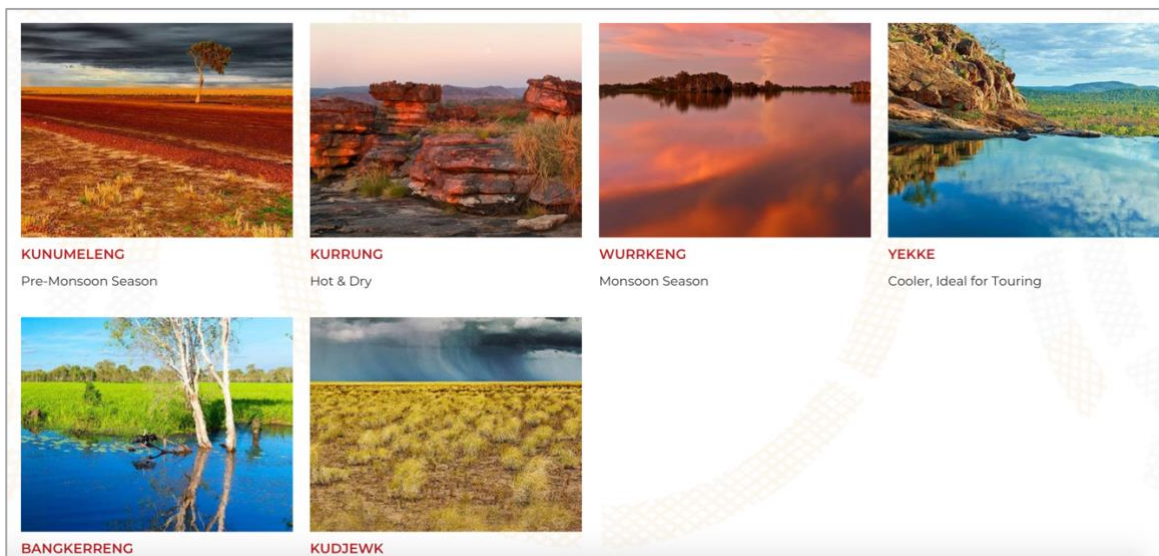
Source: <https://www.kakadutoursandtravel.com.au/info/kakadu-national-park-map/>

Source 2: Kakadu Ngurrungurrudjba-Yellow-Water-Seasons Calendar



Source: <https://www.nespnorthern.edu.au/wp-content/uploads/2016/10/Ngurrungurrudjba-Yellow-Water-Seasons.pdf>

Source 3: Landscape changes with the seasons in Kakadu



Images from Kakadu Tourism

<https://kakadutourism.com/seasons/>

Source 4: Gardening Australia in Kakadu



Costa Georgiadis and Millie Ross visit Kakadu in **Yegge**, ‘a short season of cooler weather, indicated by the flowering of many important species. The billabongs are covered in waterlilies, which are collected for their bulbs – the seeds can be mashed up to make damper.’

Screen capture from Gardening Australia SERIES 29 | Episode 27

*‘When the Andjalen or woollybutt (*Eucalyptus miniata*) start flowering, it indicates it is time to start **patch-burning** the country. Burning has been used for millennia. The rangers aim for cool fire, which is slow moving and allows trees to hold onto their leaves, animals have time to move, and the morning dew puts the flames out. Hot fires are avoided because many creatures, such as lizards and even some rare insects and plants, don’t recover’.*

*‘Plants develop adaptations to dry times. Becoming deciduous and or dormant is a characteristic more commonly associated with northern hemisphere winters, but also happen to the Kapok tree through the driest months, just as the bright yellow flowers emerge. The Bininj people from the north of Kakadu have many uses for this plant, such as eating the flowers raw or cooked and using the roots of the young plant as a food source between September and December. Kapok (*Cochlospermum fraseri*) is used for ceremonial body decorations and the bark of the tree can be used to make string and paint brushes.’*

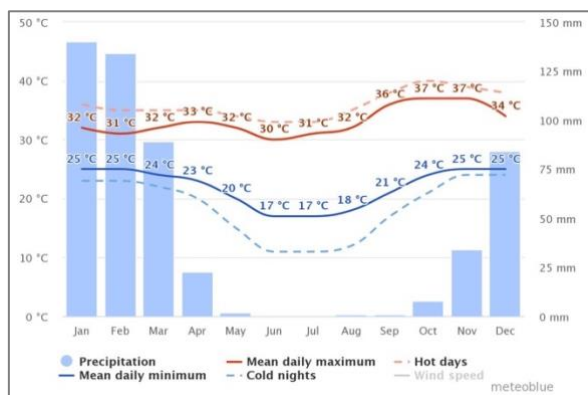
Source Gardening Australia <https://www.abc.net.au/gardening/factsheets/kakadu/10043804>

Source 5: KAKADU CLIMATE

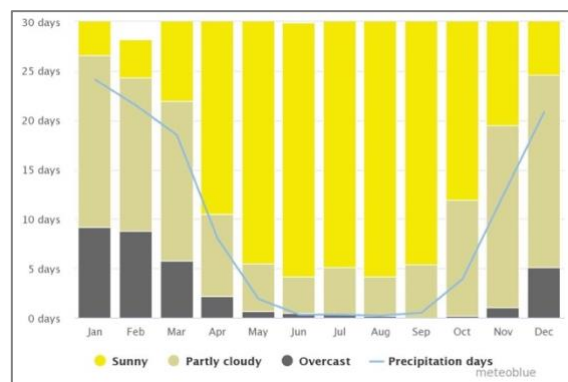
Kakadu National Park, Northern Territory, Australia, 13.04°S 132.44°E, 53m asl

The **meteoblue** climate diagrams are based on 30 years of hourly weather model simulations and available for every place on Earth. They give good indications of typical climate patterns and expected conditions (temperature, precipitation, sunshine and wind).

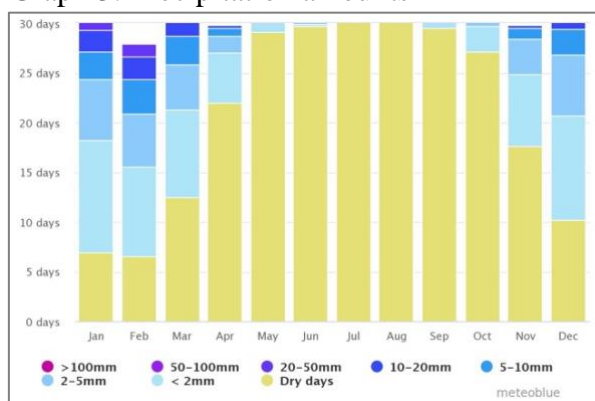
Graph 1: Average temperatures & precipitation



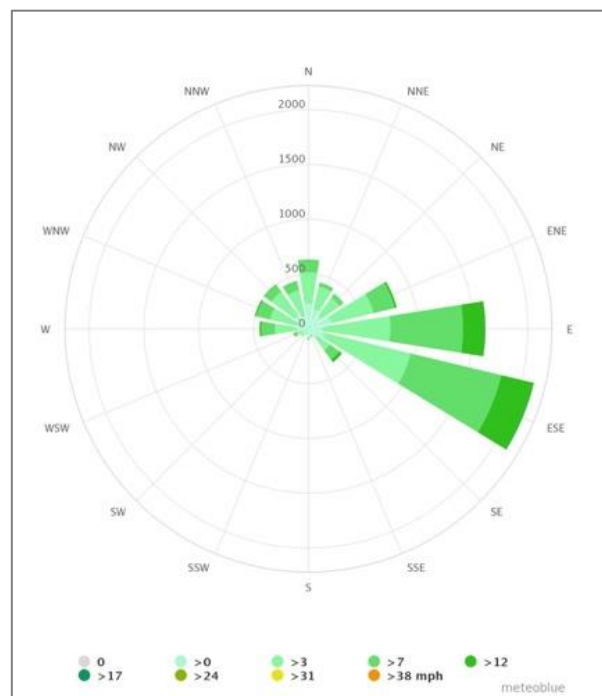
Graph 2: Cloudy, sunny and wet days



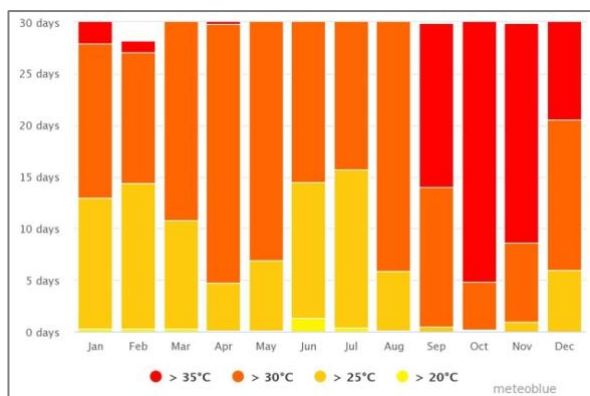
Graph 3: Precipitation amounts



Graph 5: Wind rose



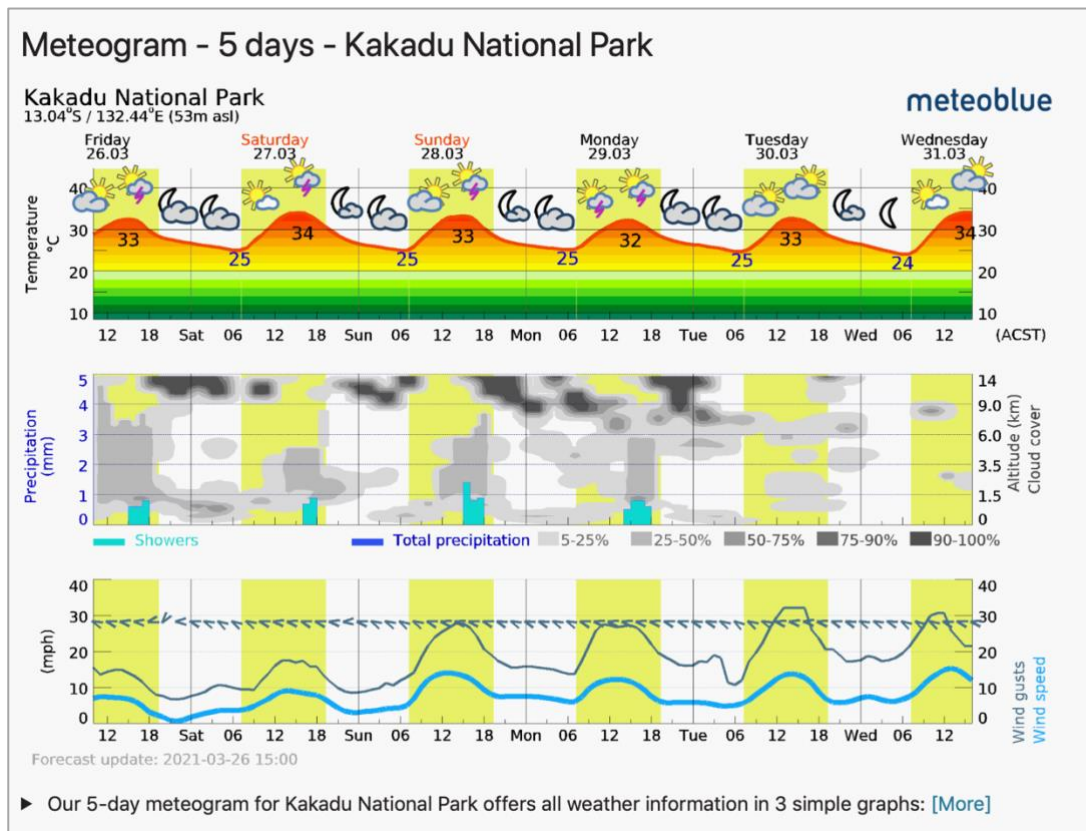
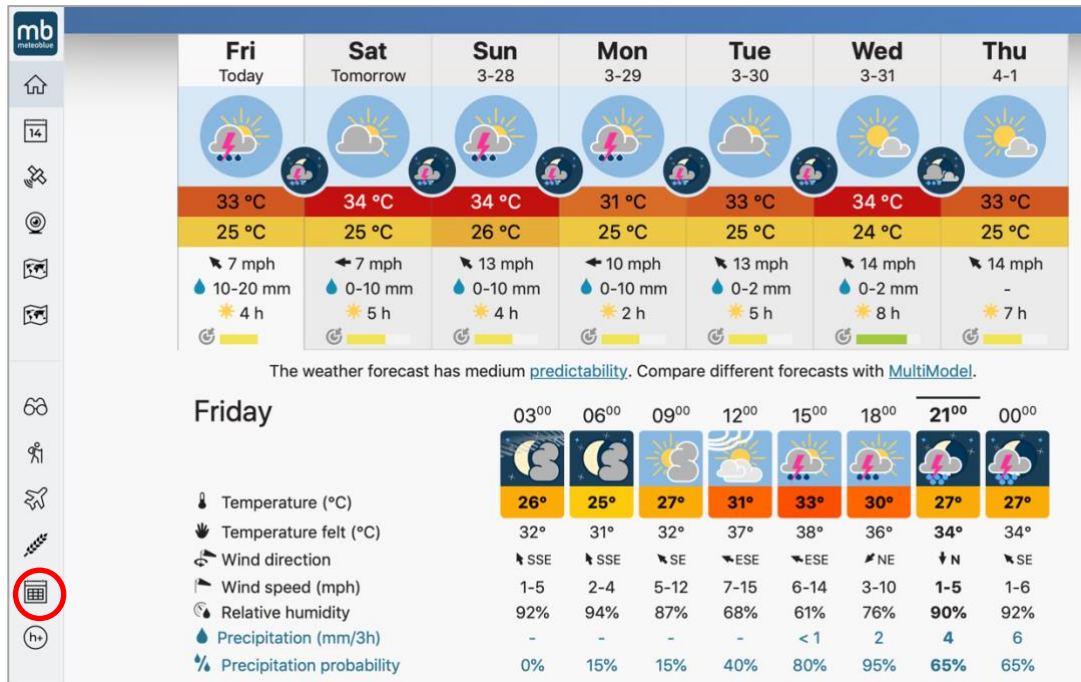
Graph 4: Maximum temperatures



The wind rose shows how many hours per year the wind blows from the indicated direction.

This data can be used under the Creative Commons license "Attribution + Non-commercial (BY-NC)" https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/kakadu-national-park_australia_6941907

Weather forecasts from meteoblue March 26, 2021



https://www.meteoblue.com/en/weather/week/kakadu_australia_8348394

Source 7: Kakadu wildlife



For more photos of the biosphere at Kakadu National Park visit the website

Source 8: Wet Season / Dry Season



The dry season is peak tourist season when it is safe to swim in upstream waterholes where crocodiles have migrated downstream or been removed.

Source: <https://venturenorth.com.au/northern-territory-tourism-blog/when-is-the-best-time-to-visit-kakadu/>

Source 9: Kakadu primary producers

	<p>Paperbark</p> <p>Tall, dense stands of paperbark trees grow on the margins of Magela Creek, Yellow Water, Anbangbang billabong and other floodplains and permanent waterholes. The dominant species are the broad-leafed and weeping paperbarks. Freshwater mangroves and water pandanus are also common</p>
	<p>Blue lily <i>Nymphaea violacea</i> Barradjungga</p> <p>Commonly seen along the margins of billabongs. Its violet-tipped white flowers appear between January and July. The seeds and stems can be eaten raw; the tuberous underground bulbs can be eaten after cooking.</p>
	<p>Freshwater Mangroves</p> <p>Mangroves are common along the banks of tidal creeks and rivers. Thirty-nine of the forty-seven Northern Territory species of mangrove occur in Kakadu. Mangroves are important for stabilising the coastline and serve as feeding and breeding grounds for many animals, including fish such as barramundi.</p>
	<p>Red lily <i>Nelumbo nucifera</i> Wurrmarninj</p> <p>Grows in lowland wetlands. Its leaves are very large and stand erect above the water. Large, fragrant deep-pink flowers appear between March and November</p>
	<p>Pandanus</p> <p>Gonggirr is the most common of the three species of pandanus found in Kakadu. It is easily recognised by its 'cork-screw' leaf arrangement. The dead leaves hang in skirts, providing a sanctuary for wrens, bats, mice and lizards. The ripe orange fruits are a favourite food of sulphur-crested cockatoos. Aboriginal people use the leaves of this pandanus for weaving baskets and mats. The large clusters of woody nuts, madjamairerri, contain seeds that are eaten raw or roasted.</p>
	<p>Speargrass</p> <p>This tall grass lines Kakadu's lowlands in the late tropical summer (February-March), when its flower spikes can grow up to 4 metres high. It gets its name from the spear-like shape of its sharp, pointed seeds. These seeds are harvested by ants and provide an important food source for birds such as finches. In Banggerreng time, around April each year, the 'knock em down storms' arrive and flatten the speargrass ahead of another dry season.</p>
	<p>Kapok</p> <p>A small native tree with beautiful yellow flowers appearing in the dry season as the plant loses its leaves. The flowers develop into green capsules, then harden and turn brown. The capsules split open to release a cotton wool-like material called kapok to which the seeds are attached. Aboriginal people used Andjedj, eating the flowers raw or cooked, the roots of young plant as a food source (September and December), Kapok for ceremonial body decorations and bark for string and paint brushes.</p>
	<p>Darwin Wollybutt (<i>Andjalen</i>)</p> <p>A common tree in Kakadu – with dark woolly bark on the lower half of the trunk, and smooth white bark on the upper trunk and branches. It is known as Andjalen. This is a calendar tree – a tree that helps Aboriginal people determine the season and what they need to do. At the beginning of the cold dry season (May-June) the woollybutt produces spectacular orange flowers signaling the time to start lighting fires, to 'clean up the country' and prevent intense wildfires late in the dry season.</p>

WEBLINKS

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<https://www.theguardian.com/australia-news/2017/mar/17/kakadu-aerial-cull-kills-more-than-6000-horses-buffalo-and-pigs>

Ranger calls it a day

<https://www.afr.com/companies/mining/kakadu-s-most-controversial-ranger-calls-it-a-day-20210107-p56sim>

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<https://www.thewildlifediaries.com/kakadu-animals/>

Kakadu board pushes vote of no confidence against park director

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<https://worldheritageoutlook.iucn.org/explore-sites/wdpaid/2572>