

Physical and climatic setting of the Arafura swamp and catchment

Location

The Arafura swamp and catchment is located in NE Arnhem Land, Northern Territory, about 450 km east of Darwin, 200 km west of Nhulunbuy (Gove) (Figure 1). It has an area of 10,365 km² (over 4 times the size of the Australian Capital Territory, a little under half the size of Kakadu National Park, 0.77% of the area of the NT), with north-south / east-west dimensions of around 180km x 80km. Of the coastal river systems in the Northern Territory, the Arafura catchment is the 9th largest in area. Other catchments in the Top End of the NT of similar size include the South Alligator River (11,814km²), the Finnis River (9157km²) and the Blyth River (9061km²).

In a biogeographical context the northern third of the catchment falls within the Arnhem coast bioregion while the southern two thirds is part of the central Arnhem bioregion (Thackway & Cresswell 1996).

Topographic map coverage for the region is available at scales of 1:250,000, 1:100,000 and 1:50,000 (Appendix 1). The single Landsat 7 satellite scene, Path 103 / Row 69, captures almost the entire Arafura catchment each 16-days. Scene 'thumbnails' can be previewed on the website of the Australian Centre for Remote Sensing (ACRES) (<http://acs.www.auslig.gov.au/intro.html>).

Climate

The climate of the Arafura region is similar to that of the rest of 'wet-dry' tropical, Top End, Northern Territory. It is strongly seasonal with a monsoon-driven 'wet-season' from December to March and a longer, almost rain-free 'dry-season' from May to September. April, October and November are generally regarded as transition months between the major wet and dry-seasons and are typified by occurrences of violent convection storms, often with spectacular electrical displays (Taylor and Tulloch 1985).

Until recently there were no weather stations located in the Arafura swamp and catchment. The nearest long-term site is at Milingimbi, an island community near the coast about 25km to the NW. However, over the last 5 years rainfall (but not temperature) data have been recorded at Ramingining in the northern catchment and at Bulman, a small community just outside the southern end of the catchment (Figure 1). During this period the mean annual