



Goulburn Islands NT02.03.01

Regional Setting

The dominant regional processes influencing coastal geomorphology in this region are the wet-dry tropical climate, trade winds, monsoons, mega to meso (limited) tides, semi-diurnal, waves dominantly seas, episodic high river sediment discharges, mixed carbonate – terrigenous sediments, tidal sediment transport, limited longshore transport, the El Nino Southern Oscillation (driving high sea-level variability), and the Madden-Julian Oscillation (driving weather patterns including monsoons and tropical cyclones).

Regional hazards or processes driving large scale rapid coastal changes include: tropical cyclones, storm surges, king tides and river flooding.

This compartment extends from Angularli Creek to Hall Point.

Justification of sensitivity

Sensitivity rating is a 3. There is no evidence on which to indicate patterns of shoreline change.

Other comments

A sandy accretional coast occurs at the west of this compartment associated with Angularli Creek. Much of the compartment is composed of the Pine Creek Orogen. Goulburn Islands (south and north) sit offshore across Macquarie Strait. These are composed of sandstones and siltstones of Kombolgie Formation with Cretaceous and laterite on top; they are generally cliffed with small beach-ridge plains on the eastern margin of North Goulburn Island. Much of the coast is rocky, with sand forming only small beaches. There are sand dunes at Hall Point.



Confidence in sources

Medium confidence: There is little evidence on which to base assessment.

Additional information (links and references)

- *An inventory of all the beaches in northern Australia has been compiled by Short (2006). This provides details of the geomorphology of each beach and other information that will be useful in determining the functioning of tertiary compartments:*
Short, A.D., 2006. Beaches of the northern Australian coast: the Kimberley, Northern Territory & Cape York. Sydney University Press.
- *There has been little comprehensive study of the coast of the Northern Territory. There is little information on the offshore characteristics of NT. A workshop was held in 2007 that summarised the nature of the offshore environment, recognising Joseph Bonaparte Gulf in the west, Arafura in the north, and the Gulf of Carpentaria in the east. The report is available at www.environment.gov.au/system/.../characterisation-workshop-report.rtf*