



Victoria & Fitzmaurice Rivers NT01.01.02

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 Turtle Point to Pearce Point.

Justification of sensitivity

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

Other comments

Turtle Point is part of the Legune coastal plain which lies on east of Keep River estuary. The low-lying saline coastal plain is likely to be subject to increased inundation. The coast is a sandy chenier ridge, in places elongated as a spit. The Victoria and Fitzmaurice River estuaries dominate this compartment. The geology of the Victoria River Region is predominantly sandstone and shale with inclusions of other sedimentary rocks. Bedrock appears to constrain tidal penetration upstream on both systems. Low-lying islands in the estuaries are composed of saline supratidal flats, or some are entirely covered with mangroves. Beaches along Treachery Bay to north of the compartment are backed by low lateritised bluffs and often have mangrove fringe in front.



Confidence in sources

Low confidence: No data available. There has been little comprehensive study of the coast of the Northern Territory.

Additional information (links and references)

- http://irm.nt.gov.au/_data/assets/pdf_file/0018/13914/27_legune.pdf
- *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