



## Keep River (Joseph Bonaparte Gulf) WA13.05.01

### Regional Setting

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

This coastline is susceptible to regional hazards, including tropical cyclones, storm surges and river flooding.

This coastal lowlands compartment extends from East Cape Domett to Turtle Point.

### Justification of sensitivity

The sensitivity rating is a 4 as the shoreline is stable but likely to start eroding. The tidal flats are dynamic coastal lowlands and are likely to undergo some erosion or reorganisation of the patterns of tidal creeks, in response to variation in sea level or river discharge.

### Other comments

Broad tidal flats and the estuarine reaches of the Keep River are the main landforms of the compartment. The width of the tidal flats and density of tidal creeks draining them increases with distance east and proximity to the Keep River estuary and its deltaic lowlands. The shoreline of tidal flats has beaches backed by cheniers with active blowouts and washover fans, and are cut by small tidal creeks. Salt flats, basins and residual knolls are apparent along the landward margins of the tidal flats.



Geomorphological features include mud flats and mangroves.

This compartment has a NNE aspect.

### **Confidence in sources**

Moderate confidence: Limited or no information specifically describing landforms or coastal landform change is available for the historical period. However, multiple photographic runs and other regional investigations of landforms have been published.

Interpretation of landform assemblages from satellite imagery, available literature and aerial photography.

### **Additional information (links and references)**

Australian Beach Safety & Management Program (ABSAMP) database of over 12,000 beaches can be accessed at [http://www.ozcoasts.gov.au/coastal/beach\\_intro.jsp](http://www.ozcoasts.gov.au/coastal/beach_intro.jsp) (also see Surf Life Saving site);

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