



King George River WA13.04.01

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 rocky coast compartment extends from Cape Londonderry to Cape Bernier.

Justification of sensitivity

The sensitivity rating is a 3 as the shoreline is stable and likely to remain stable. The susceptibility ranking is attributed to the rocky, cliffed coast. A higher susceptibility rank (4) would be attributable to the depositional landforms due to remoteness from a substantial sediment supply other than bioproduction and local reworking by tidal currents.

Other comments

Three landform assemblages are apparent: [1] Cliffs and structurally controlled headlands are common features, although small beaches have formed between headlands (52%). [2] Beachrock and fringing reefs, in places with some beach formation between headlands (24%). [3] Major creeks or rivers, such as the King George River, are incised in fault lines and have tidal flats and channels in local areas afforded shelter or deposition (10%).



Geomorphological features include coral reefs, embayed sandstone coast 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 (also see Surf Life Saving site);

Australian Maritime Safety Authority (AMSA). (2006) Oil Spills Response Atlas. Australian Government Canberra. Available at <https://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/general-information/OSRA/index.asp>

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Sharples C, Mount R, Pedersen T, Lacey M, Newton J, Jaskierniak D & Wallace L. (2009) The Australian Coastal Smartline Geomorphic and Stability Map. Version 1: Project Report. Geoscience Australia & Department of Climate Change, www.ozcoasts.gov.au/pdf/SmartlineProjectReport_2009_v1.pdf

Short AD. (2006) Beaches of the Northern Australian Coast: The Kimberley, Northern Territory and Cape York: A guide to their nature, characteristics, surf and safety. Australian Beach Safety and Management Program. University of Sydney Coastal Studies Unit and Surf Life Saving Australia. Sydney University Press. Sydney, New South Wales.

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