Western Cape York Peninsula QLD02.02.01

Regional Setting

The dominant regional processes influencing coastal geomorphology in this region are the wet-dry tropical climate, trade winds, monsoons, irregular meso-tides, large seasonal mean sea-level range, low to moderate seas, seasonally high river sediment discharges, terrigenous sediments, the El Nino Southern Oscillation (driving sea-level variability & tropical cyclone frequency), 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 and river flooding.

This compartment extends from Mitchell River to Aurukun.

Justification of sensitivity

Sensitivity rating is a 3. The coast appears stable, but there has been little description of this coast. This coast could still be accreting and be a 2 or even a 1.

Other comments

North of the mouth of the Mitchell River, a series of chenier ridges have been deposited, prograded across 12km of coastal plain (Nanson et al., 2013). This progradational plain narrows to the north, but is still >7km wide at the mouth of a highly meandering creek. There has been little description of the coast further north.

Confidence in sources

Low confidence: There is little evidence on which to determine contemporary processes.

Additional information (links and references)

Nanson, R.A., Valcarelov, B.K., Ainsworth, R.B., Williams, F., Price, D., 2013. Evolution of a Holocene, mixed-process, forced regressive shoreline: the Mitchell River delta, Queensland, Australia. Marine Geology.