



## Bustard Bay QLD04.03.09

### Regional setting

The regional processes dominating this region include the wet tropics to humid sub-tropical climate, south-east trade winds, meso tides (2.27m), strong tidal currents, low to moderate south-east seas (south-east wind-waves), dominantly terrigenous sediments with interrupted northerly longshore sediment transport (low-moderate), the El Nino Southern Oscillation (driving sea-level variability, tropical cyclone frequency, beach erosion/accretion cycles); 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, river flooding, and variable longshore sand transport.

This compartment extends from Richards Point to Round Hill.

### Justification of sensitivity

Overall sensitivity rating of 3.5. Sensitivity is predominately 4 on the sandy beaches and along the tidal flats; 3 on the bedrock headlands.

### Other comments

This compartment faces northeast and extends for 60 km between Richards Point and Round Hill. It contains a series of five embayed tide-modified beaches on Rodds Peninsula, another series on Bustard Head, then the 23 km long curving beaches between Bustard Head and Round Hill Creek - all of which are anchored by bedrock headlands and the longer beaches bordered by tidal inlets feeding into mangrove-lined creeks and tidal flats. The entire sandy shore (60%) is composed of well-sorted fine quartz sand that may have been delivered by northerly longshore sand transport around Round Hill. It is susceptible to storm surge and sea level rise, with sea level



rise also reactivating the flood tide deltas and generating further sand loss. The beaches are predicated to erode between 180 m on the beaches, to 400 m at the tidal inlets by 2100. The only development at Round Hill is on high ground, apart from tourist/marina facilities in the Round Hill estuary

**Additional information (links and references)**

Short, A D, 2000, Beaches of the Queensland Coast: Cooktown to Coolangatta. Sydney University Press, Sydney, 360 pp.

<https://www.ehp.qld.gov.au/coastalplan/coastal hazards.html>



*Bustard Bay – Richards Point to Round Hill.*