



## Port Curtis (south) QLD04.03.08

### Regional setting

The regional processes dominating this region include the wet tropics to humid sub-tropical climate, south-east trade winds, meso-macro tides (2.9m), 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 Gatcombe Head to Richards Point.

### Justification of sensitivity

Overall sensitivity rating of 4.5. Sensitivity ratings range from 4 on the presently stable shores, to 5 on the presently eroding shores, with all likely to be exacerbated by sea level rise.

### Other comments

Port Curtis is a northeast facing bay, with a 25 km wide mouth between Gatcombe Head and Richards Point that expands into a 90 km long shoreline dominated by three long, sandy tide-modified beaches in the north-centre, and mangrove-lined tidal flats in the southern Rodds Bay. Each of the beaches is backed by low regressive barriers and bordered by tide-dominated tidal creeks. Sediments are predominately fine quartz sand, locally enriched with carbonate sands. This is a highly susceptible sedimentary shoreline that is presently experiencing erosion at Liley's Beach, Boyne



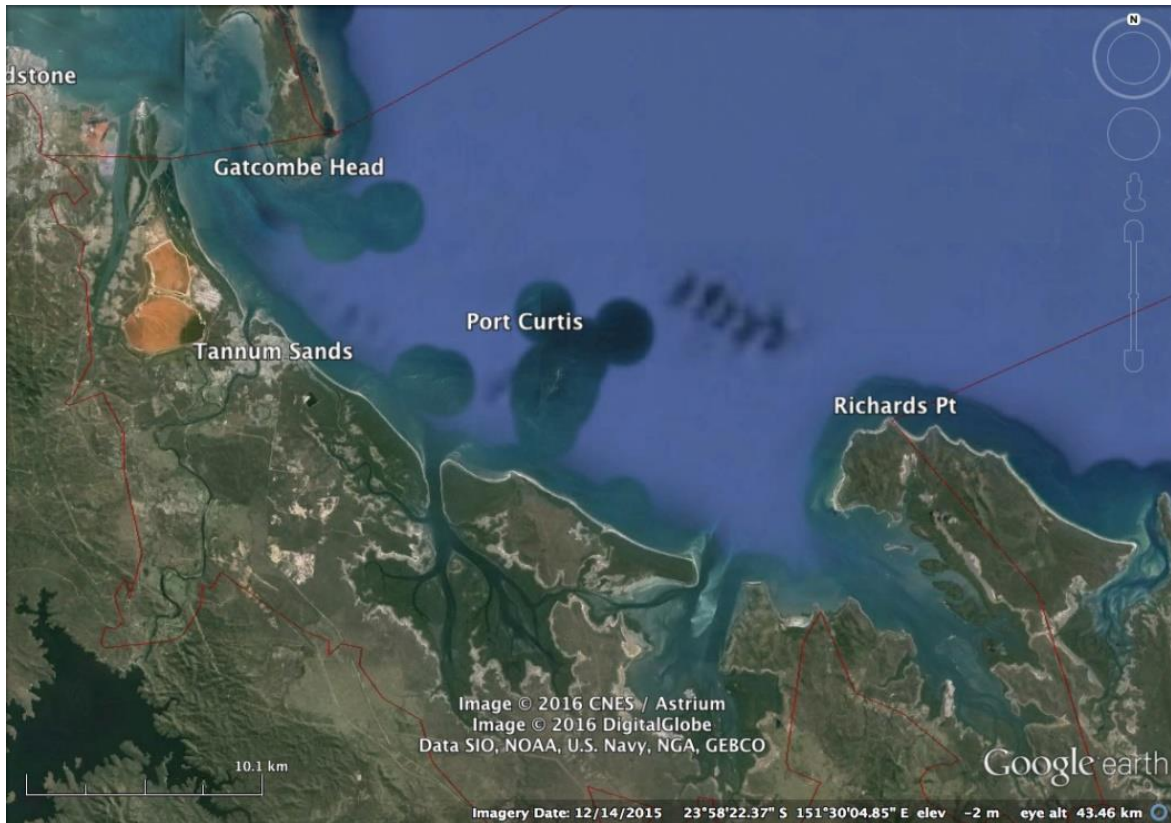
Island, Tannum Sands, and the Wide Cattle and Colosseum Inlets. This entire shore is likely to be sensitive to both storm surge and sea level rise, including the impact of changing tide range on the tidal inlets and estuaries.

**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/coastalhazards.html>

<http://www.gladstone.qld.gov.au/documents/1570002/41723559/Boyne%20Island%20and%20Tannum%20Sands%20Shoreline%20Erosion%20Management%20Plan%20Final%20Report%20September%202014.pdf>



*Port Curtis (S) – Gatcombe Head to Richards Point.*