



Bribie Island QLD05.01.06

Regional setting

The regional processes dominating this region include the wet tropics to humid sub-tropical climate, south-east trade winds, micro tides (1.2m), southerly swell, 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 Deepwater Point to Skirmish Point.

Justification of sensitivity

Sensitivity rating is a 5, owing to existing erosion issues on both sides of the island and potential northern spit breakthrough.

Other comments

Bribie Island's east coast extends for 32 km, from the northern entrance to Pumicestone Passage to its southeastern tip at Skirmish Point, as one long, continuous, curving sandy beach composed of well-sorted fine quartz sand. The beach is part of a low regressive Holocene barrier that is backed by the meandering tide-dominated Pumicestone Passage. Longshore sand transport is northward along the beach, with the sand composed of well-sorted fine quartz sand. There are existing erosion issues at the northern 4 km long spit and in the south at Woolum. The beach is predicted to erode by up to 175 m, and the northern spit predicted to



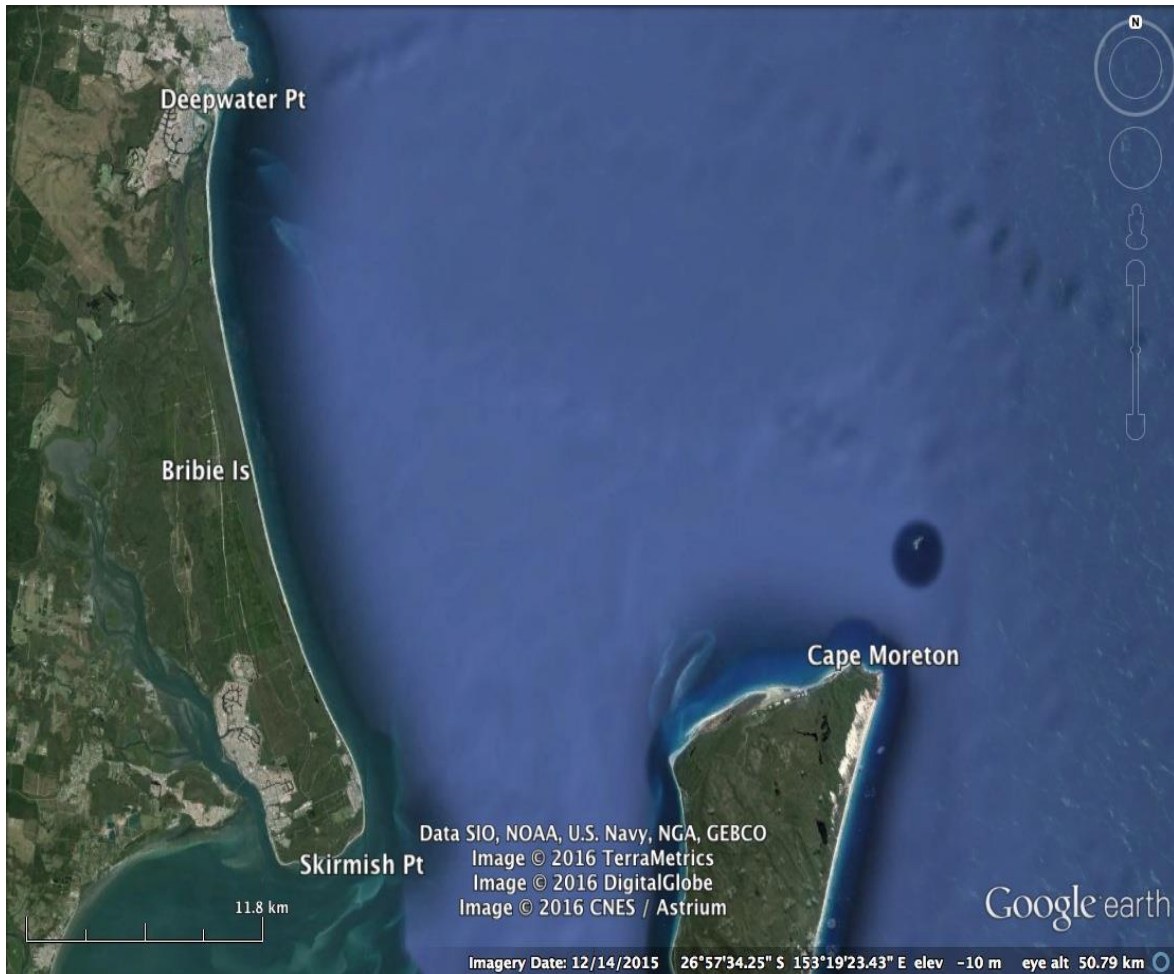
be completed eroded, by 2100. In addition, storm surge and the rising sea level will increase potential inundation of the low-lying island, as well as modifying the tidal flows into and out of northern Moreton Bay; this will impact the northern and southern island shores, including the northern spit.

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>

<https://www.moretonbay.qld.gov.au/BribieSEMP/>



Bribie Island – Deepwater Point to Skirmish Point.