



Capricorn Coast (north) QLD04.03.02

Regional setting

The regional processes dominating this region include the wet tropics to humid sub-tropical climate, south-east trade winds, meso-macro tides (3.6m), strong tidal currents, low to moderate south-east seas (local 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.

Justification of sensitivity

Overall sensitivity rating of 4.5. Sensitivity ratings range from 3 on the bedrock section and some of the larger barriers, to 4 on the southern beaches and the Corio Bay tidal flats. Yeppoon is already susceptible to erosion and is rated 5.

Other comments

This compartment is a relatively straight, 50 km long, exposed east-facing coast, sheltered in the south by the Keppel Islands, and with Corio Bay separating the northern and southern coast. The coast has been a major depo-centre for fine, well-sorted quartz sand, derived from the Fitzroy River and transported north to form the large regressive barrier of Farnborough Beach; and the large, now stable, transgressive dune of the Nine Mile and Five Rocks Beaches; and the rocky coast up to Cape Manifold. The dune transgresses up to 12 km inland. Corio Bay is a tide-dominated, sand-filled bay with wide tidal flats fringed by mangroves. The only development on the coast is in the south, at the Capricorn Resort, and from



Farnborough to Yeppoon. The northern 10 km are part of the Shoalwater Bay Military Training Area.

The entire coast is susceptible to storm surge, especially in Corio Bay, and to sea level induced erosion. The beaches are likely to respond slowly to sea level rise owing to the large volume of sand stored in the barriers and possibly in the nearshore. The suggested damming of the Fitzroy River would, however, decrease the supply of fluvial sediments.

Additional information (links and references)

BPA, 1979, *Capricorn Coast Beaches*, Beach Protection Authority, Brisbane, 238 pp.

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>



Capricorn Coast (N) – Cape Manifold to Yeppoon.