



## Burnett River (north) QLD04.04.01

### Regional setting

The regional processes dominating this region include the wet tropics to humid sub-tropical climate, south-east trade winds, meso-macro tides (2.55m), 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 Round Hill to Burnett River Mouth.

### Justification of sensitivity

This is a predominately sandy coast with long straight beaches and tidal creeks, all of which will be impacted by sea level rise and changes in longshore sand transport and tidal range, resulting in a sensitivity rating of 4.

### Other comments

This is a relatively straight, exposed, east to northeast-facing coastline that extends for 90 m from Round Hill to the Burnett River mouth, with 90% of the coast consisting of 30 sandy tide-modified beaches, together with Blackwater, Baffle and Littabella Creeks and the Kolan and Burnett River mouths. This is the northernmost section of the southeast coast to receive southerly swell and so marks an increase in wave energy and potential northerly longshore sand transport. Sand is predominately well-sorted medium quartz sand. The entire shore is susceptible to storm surge and sea

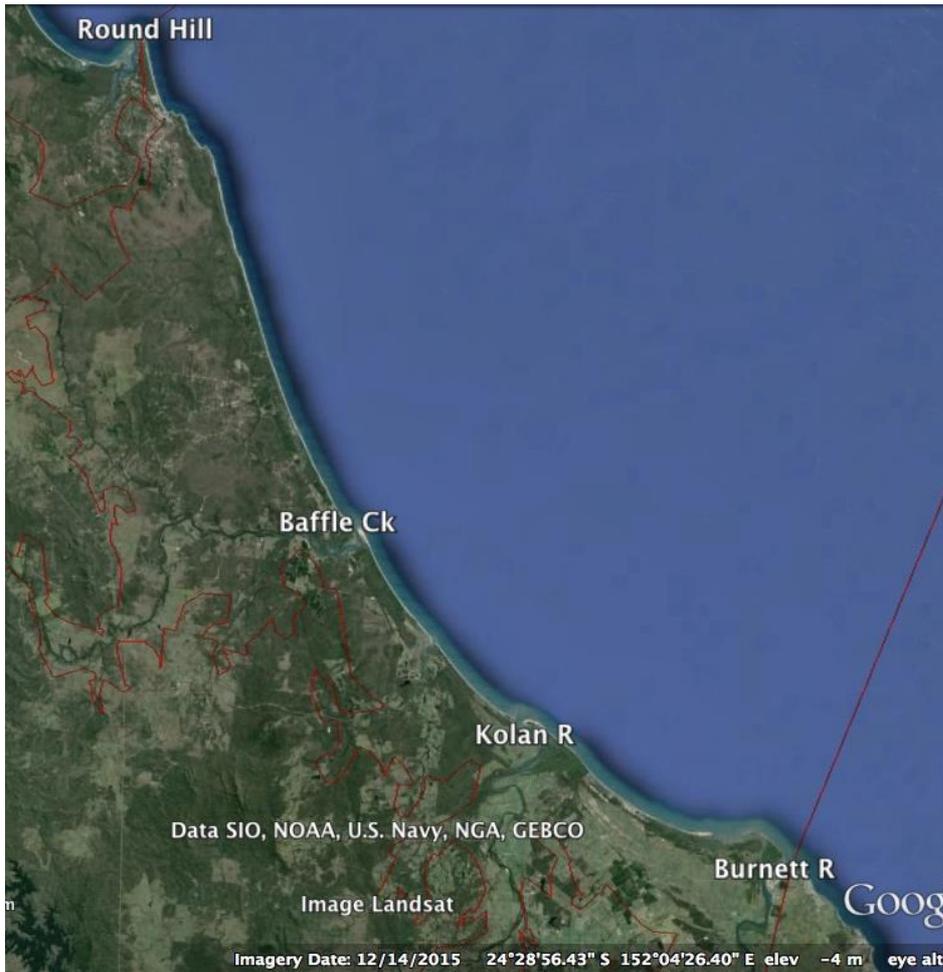


level rise, with the beaches predicted to erode by up to 200 m, and the tidal creek-river mouth by up to 400m, by 2100. In addition, sea level rise will induce saline intrusion into the backing deltaic highly productive plain and lowlands. Most of the coast is undeveloped, with communities in the north at Round Hill-Agnes Waters and in the south at Moore Park, while the mouth of the Burnett River is trained.

#### **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>



*Burnett River (N) – Round Hill to Burnett River mouth.*