Breton Bay WA07.01.01

Regional Setting

The dominant regional processes are the Mediterranean to arid climate; the El Nino Southern Oscillation (driving sea-level variability); Southern Annular Mode (driving south-westerly swells and storms); strong sea breezes; micro to meso tidal, mainly diurnal; south-westerly swells; southerly seas; and carbonate sediments with moderate northerly longshore transport.

This coastline is susceptible to regional hazards, including extra-tropical cyclones, mid-latitude cyclones (depressions), storm surges, and river flooding (sub-regions only).

This mixed sand and rock coast compartment extends from Guilderton to Ledge Point.

Justification of sensitivity

The sensitivity rating is a 3 as the shoreline is currently stable and likely to remain stable.

This is a mainly rocky coast, with beaches and dunes over-riding calcarenite pavement reefs, rock platforms and lithified eolian sediments. The pattern of reefs directly affects coastal dynamics, the formation of local sediment cells and the distribution of sediment derived from on and offshore.

Other comments

Common landform assemblages:
Broad, gently sloping sandy beach with well-vegetated primary dune, often backed by parallel beach ridges or stabilised parabolic dunes (85%); Broad smooth gently

sloping, coarse-grained sandy beach, with some active dunes and unstable blowout areas (10%).

Geomorphological features include offshore limestone reefs, limestone platforms, limestone headlands, narrow beaches, dunes, Moore River.

This compartment has a SW aspect.

Confidence in sources

Moderate Confidence: Coastal landforms are well described in available management literature. However, neither sediment movement along the rocky coast and through the reefs, nor the sediment budget for the coast is well known. Interpretation of landform assemblages comes from satellite imagery, aerial photography, as well as site visits and published information.

Additional information (links and references)

Australian Beach Safety & Management Program (ABSAMP) database of over 12,000 beaches can be accessed at http://www.ozcoasts.gov.au/coastal/beach_intro.jsp (also see Surf Life Saving site)

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