Shark Bay (east) WA09.03.05

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 coastal lowlands compartment extends from Wooramel Coast to Grey Point.

Justification of sensitivity

The sensitivity rating is a 3 as the shoreline is stable and likely to remain stable. Some sediment may be supplied by intermittent discharge from the Wooramel River following extreme storm events, erosion of the Wooramel delta and reworking of sediments from outwash plains. Small spits along the shore indicate a northerly littoral drift. Sediments are lost from the shoreface through channels draining the tidal and subtidal terraces.

Other comments

Common landform assemblages:

Subtidal and intertidal terrace extends northwards along the updrift coast from the Wooramel River delta to an inactive delta of the Gascoyne River. The tidal flats are cut by channels discharging off the subtidal terraces into deep water (100%). Some channels are controlled by protection from offshore and onshore reef systems. In the south, the tidal flats flank salt flats abutting low cliffs and sand ridges.

Geomorphological features include extensive subtidal terraces, tidal creeks, spits, mangroves and an outwash plain.

This compartment has a SW aspect.

Confidence in sources

Moderate confidence: Limited or no information describing landforms or coastal landform change over the historical period is available. Interpretation of landform assemblages comes from satellite imagery, aerial photography and available literature.

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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