



## Ningaloo (Cape Range) WA10.02.04

### 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 Winderabandi Point to North West Cape.

### Justification of sensitivity

The sensitivity rating is a 4 as the shoreline is currently stable but likely to start eroding. Cuspate forelands in the lee of coral reefs, and sediment supply from the reefs and inshore lagoons are susceptible to changing metocean conditions. Scarped foredunes and (with the exception of the complex foreland at NW Cape) small foreland size suggest sediment supply is limited.

### Other comments

Common landform assemblages:

The shoreline is irregular in form. Sheltered sandy beaches are controlled by protection from offshore and onshore reef systems, and commonly perched on intertidal platforms, inshore pavement and beach rock ramps. Additionally, some beaches - such as the beach at Turquoise Bay - are on the flanks of small salients and cuspate forelands. A narrow



episodic transgressive barrier is present in the compartment; it widens along the NW facing coast between Jurabi Point and North West Cape.

Geomorphological features include fringing coral reefs, beaches, dunes and emerged terraces.

This compartment has a WNW aspect.

### **Confidence in sources**

Low 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, site visits and aerial photography.

### **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](http://www.ozcoasts.gov.au/coastal/beach_intro.jsp) (also see Surf Life Saving site)

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