



## Shark Bay (west) WA09.03.01

### 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 coastal lowlands compartment extends from Cape Peron (N) to Monkey Mia.

### Justification of sensitivity

The sensitivity rating is a 4 as the coast is currently stable but likely to start eroding. Spits along the shore indicate phases of northern littoral drift, as well as points where sediment appears to be lost into deeper water. These are likely to change with future variation in climate.

### Other comments

Common landform assemblages:

Beachrock and adjacent fringing reefs form the coast, with some sandy beaches between headlands (56%). Narrow sandy beach with extensive beachrock (44%) occurs on much of the coast. The beach connects numerous small embayments between rocky headlands or sandy salients, which are partially closed by spits and bars. Landward of the spits and bars are narrow, low-lying fore-dune plains and salt flats



Geomorphological features include rocky headlands, an embayed coastline, spits, beaches and dunes.

This compartment has a NE aspect.

### **Confidence in sources**

Low confidence: Limited or no information describing landforms or coastal landform change over the historical period is available, except for the coast in the vicinity of Monkey Mia. Interpretation of landform assemblages from satellite imagery, aerial photography and site visits.

### **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);

Australian Maritime Safety Authority (AMSA). (2006) Oil Spills Response Atlas. Australian Government Canberra. Available at <https://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/general-information/OSRA/index.asp>

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[http://www.transport.wa.gov.au/mediaFiles/marine/MAC\\_R\\_ShiresOfSharkBayAndExmouthFullReport.pdf](http://www.transport.wa.gov.au/mediaFiles/marine/MAC_R_ShiresOfSharkBayAndExmouthFullReport.pdf).

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