



## Coffs Harbour Coast NSW01.02.03

### Regional Setting

The dominant regional processes influencing coastal geomorphology in this region are the humid warm to cool temperate climate, micro-tides, south-easterly Tasman Sea swells, easterly seas, dominantly quartz (terrigenous) sediments with northerly longshore transport in the northern part, and the El Nino Southern Oscillation (driving beach erosion/accretion cycles, cyclone frequency).

Regional hazards or processes driving large scale rapid coastal changes include: East Coast Lows (extra-tropical cyclones), mid-latitude cyclones (depressions), and storm surges (<1m).

This compartment extends from Bare Bluff to Coffs Harbour.

### Justification of sensitivity

Sensitivity rating is a 4 overall, although a higher rating of 5 is given to some pocket beaches.

### Other comments

Coffs Harbour coast has a south-easterly orientation. Small bedrock enclosed tertiary compartments occur to the north. The longer beaches, such as Fiddamans Beach, are backed by transgressive dunes and have been mined in the past. Some beaches in this compartment were inferred to be eroding (with low confidence) in Chapman et al. (1982). There is abundant shingle mixed with sand in some of the pocket beaches. Sand could be lost seawards with rising sea levels leaving a lag of shingle to form beaches in such places.



Park Beach, to the north of the artificial harbour, has been starved of sand from the south to north littoral drift system as a result of harbour construction (Lord and Van Kerkvoort, 1980). Although there has been some attempt at nourishment through sand dredging from within the port, Park Beach appears sensitive to long term recession unless more nourishment is undertaken. Sand extraction for commercial use has occurred on the beach to the south of the port, further limiting supplies to Park Beach.

### **Confidence in sources**

Medium confidence: Coffs Harbour Council has undertaken studies on sedimentation of the port along with port authorities.

### **Additional information (links and references)**

Chapman, D.M., Geary, M., Roy, P.S., Thom, B.G., 1982. Coastal Evolution and Coastal Erosion in New South Wales. Coastal Council of New South Wales, Sydney.

Lord, D., van Kerkvoort, A., 1980. A preliminary assessment of the stability of Sawtell Beach. NSW Department of Public Works, Coastal Engineering Branch, Report no PWD 80026