



Sediment Dynamics of Vengulra-Aravli beach, Central West Coast, India

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The beaches are by far the most widely distributed of any of the coastal sedimentary environments. A great many factors are involved in providing sediment for accumulation and development of the beach. The sediment at most places is locally derived, however it can travel and could have traveled long distances shaping the beaches over different season/annual cycles. The granulometric analysis of sediments has long been oriented towards finding environment diagnostic descriptors of grain size distributions (McLaren, 1981) using either the Friedman's (1961, 1967 and 1979) moment method or more commonly the Folk and Ward's (1957) graphic method. It is understood that, the grain size analysis is one of the important tools to delineate littoral drift. The assessment or understanding of this littoral drift and the littoral drift data help to assist in many developmental schemes such as- the harbor development, recreation, tourism development, location of sand traps, growth of coastal bars/spits beach starvation and associated erosion, coastal protection, navigation and so on.

In the present study, the sediment dynamics of Vengurla-Aravli stretch of beach has been undertaken using the four seasons (Premonsoon, Monsoon & Postmonsoon 2003; and Premonsoon 2004), grain size data along with the supporting data on longshore currents and wave parameters collected at 14 study sites. The sediment samples were collected across the beach at every 10 m interval.

The study highlights textural variation, sediment movement across and along the beach, energy condition and overall depositional environment of the study area.