

M.S. 47. SATHEESCHANDRA SHENOY, S.—Studies on the Littoral Processes in Relation to Stability of Beaches Around Cochin—1984—Dr. P.G. Kurup.

The results of studies carried out on the dynamical effects of environmental parameters on the shoreline processes along the beaches around Cochin are presented in this thesis.

The deep water wave characteristics and their monthly variations have been obtained from the analysis of available data and presented as wave roses in Chapter 2.

It has been found that during fair weather season low, long period swells are predominant while the southwest monsoon season is characterized by the predominance of high and steep low period waves.

The wave refraction studies indicated greater amplification of the waves as they propagate ashore particularly from the southerly compared to those from the northerly quadrants.

While making a comparative study of the predicted wave heights at 2 m isobath with the observed field data on breakers, the presence of large-scale anomalies have been found.

The sediments of beaches in general fall in the medium to fine sand-size limits and reflect a low energy environment.

The total quantum of sediment in transit has been estimated to be $9.5 \times 10^6 \text{m}^3$ during rough weather season and $7 \times 10^6 \text{m}^3$ during fair weather season.

The erosional and depositional tendencies of the beaches have been estimated through beach profile surveys

The beaches exposed to wave action presented cyclic changes showing erosion during southwest monsoon season and accretion during rest of the year.

The beaches along the shore from Azhikode to Anthakaranazhi are comparatively low energy environments and the erosion, though considerable, takes place for a short period during the year coinciding with the wind and wave climates of the southwest monsoon season.