

**M.s.70. PRASANNAKUMAR, S.—Studies on sediment transport in the surf zone along certain beaches of Kerala—1987—
Dr. P.G. Kurup.**

The observed geometric changes of the beaches at various locations from Azhikode to Anthakaranazhi along the central part of the Kerala coast, the distribution of sediments of these beaches, the available wave energy potential, the wave induced flows and the computed littoral drift from the mean wave climates have been presented.

This study aims to understand the sediment transport along this stretch of the coast considering the increased problem of beach erosion in spite of attempts made to prevent or reduce erosion through construction of artificial shore protection structures such as seawalls and groins.

The beaches within Narakkal and Anthakaranazhi zones, in general, indicated near-cyclic behaviour, undergoing similar patterns of accretion and erosion within each of the zones.

An examination of the wave climate of this coast shows that waves approaching the coast with deep water directions of 220°TN to 300°TN and with periods varying from 6 sec to 14 sec, contribute significantly in the complex littoral movement of sediments along this coast.

The changes observed in the sediment characteristics of these beaches show that, excepting the beaches in Fort Cochin zone, all the beaches in the remaining three zones are composed of sediments finer than fine sands.

The presence of calm and muddy water in patches off Narakkal and Malipuram affect the kinematic viscosity of the waters.

The computed littoral sediment transport for the rough and fair weather seasons indicates a net southerly transport within the surf zone along both the littoral cells.

This study indicates clearly that the sediment movement along the beaches

bordering these barrier beaches is not a continuous process but is confined to more or less closed cells within which the sediment get recirculated.