Physical Research Laboratory

Tuesday Seminar

Characterisation of organic matter source and sediment distribution in Ashtamudi Estuary, southern India

Abstract

Modern climate study is essential to develop an understanding of past climate change. The present study is focused on the surface sediments of Ashtamudi Estuary (Kerala, southern India) to understand (i) the fate and sources of organic matter by investigating lipid biomarker (n-alkanes) distribution in modern sediments and vegetation samples; and (ii) the factors controlling the sediment distribution into the lake basin using geochemical approach. A number of n-alkane indices have been calculated to illustrate the variability in space by considering separately the river dominated northern reaches and marine-influenced southern part of Ashtamudi Estuary. The P-aqueous (Paq) and terrigenous/aquatic ratio (TAR) indices demonstrate maximum aquatic productivity (plankton growth and submerged macrophytes) in the tidal dominated region of the Ashtamudi Estuary. The carbon preference index (CPI) and average chain length (ACL) provide evidence for high terrestrial input in the river dominant region, whereas the lower end of the estuary is dominated in high aquatic productivity. The geochemical approach enabled us to delineate natural (fluvial and marine) versus anthropogenic factors in controlling the sediment distribution into the basin.

Speaker: Dr. Praveen Mishra
INSPIRE Faculty
WIHG, Dehradun

Date	Time	Venue
30-January-2018	16:00 hrs	Ground Floor Lecture Hall

All are invited to attend and participate in discussion

Tea at 15:30 hrs

A .K. Sudheer, Geosciences Division