PREFACE

The thesis is based on the sampling and analysis of surface and bottom waters, sediments and biomaterials collected from southwest coast of India covering the entire sector of coastal Kerala from Kasaragode to Vizhinjam comprising of eight active coastal zones and from two important highly dynamic estuarine regions namely; Chaliyar and Cochin estuaries. The water samples were analysed for general hydrographic parameters such as salinity, dissolved oxygen, pH as well as dissolved and particulate fractions of trace metals. The sediment texture, organic carbon and various geochemical fractions of metals in the sediment samples were estimated. Trace metals concentrated in various parts of biomaterial were also analysed.

The results of the study are presented in six chapters.

Chapter 1, the introduction reviews the importance of the study and also the geochemical fractionation methods of trace metals in the sediments along with the scope of the present investigation.

Chapter 2 describes the study area and details of the material and methods employed in this study.

In Chapter 3, the general hydrographic features of the study area and a brief review of the sedimentological features along with the geological background of the study area are presented and discussed.
Chapter 4 describes the distribution of trace metals in the water and sediments of Kerala coast and the Chaliyar and Cochin estuaries.

In Chapter 5, the results of geochemical partitioning of trace metals, Cu, Zn, Cd, Pb, Fe and Mn are discussed. The various metal fractions studied in different environments are compared. An attempt has also been made to evaluate the significance of geochemical partitioning in the coastal ecosystem. The levels of trace metals observed in the various parts of the body of the biomaterials are also discussed.

Chapter 6 summarises salient features of the investigation.