Coastal zone is one of the most dynamic and distinctive areas being the meeting place of the land, the sea and the air. Coastal zones are endowed with variety of natural resources and facilities and there has always been a zone of hectic human activity. In the coastal areas, numerous problems such as devastation of natural habitats due to erosion, pollution, siltation, over population, saltwater intrusion, flooding etc. are encountered.

The Kerala coast, which is a treasure house of many strategic minerals experiences severe erosion along long stretches of the coast and consequent impairment of the property lying in the coastal zone. However, few patches of the coastal land are preserved due to the formation of mud banks which are unique in nature along this part of the coast.

|Mud banks| are natural smooth water anchorages formed at particular locations along the Kerala Coast during the south West monsoon season. It extend outwards up to a distance of 3-4 kilometres from the shore. These are semi-circular in shape, with their northern and southern edges defined by two crescentic lines of breakers running outwards to the sea. The formation of the mud banks play a major role in moulding the social and economic set up of the coastal people by providing a stable fishing ground during the monsoon season. Mud banks affect the coastal processes by damping the waves in the following ways:
1. Traps the littoral material transported from the updrift side thereby preventing its downcoast movement.
2. Causes refraction of waves on its sides.
3. Protects the beach in particular from erosion.

Lot of literature are available regarding the formation of mud banks, its migration, physical, chemical and biological aspects. But systematic studies conducted for an understanding of the source of mud bank sediments are very limited.

Keeping in view of the above said fact, in the present doctoral work, an attempt has been made to study in detail the mud banks of central Kerala, i.e. of Narakkal, Saudi and Purakkad areas which are reported as permanent mud banks, since olden days. The studies have been conducted during the years 1985 and 1986. The primary objectives of the present study are the following:

1. To cite the provenance of the mud bank sediments of central Kerala coast.
2. To assess the influence of Vembanad lake on the formation of mud banks.
3. To understand the clay mineralogical variations of the lake and mud bank sediments.
4. To delineate the variation of the chemical constituents of the lake and mud bank sediments.

The thesis is divided into seven chapters. First chapter deals with the general introduction which includes a general description
of the mud banks, its importance, location and geographic setting, climate, rainfall, vegetation and geomorphology of the South Kerala coast. Chapter 2 gives an exclusive description to the readers about the mud banks, its nature and formation, hydrography, suspended matter, flocculation and deflocculation, waves and currents. Recent literature available about the mud bank studies are also dealt with in this chapter. Chapter 3 deals with the material and methods, which are discussed under three heads (1) objectives of sampling (2) field methods and (3) laboratory techniques. Chapter 4 deals with the textural characteristics of the sediments. Results of the textural analysis of the sediments of different environments are presented with their respective discussion. Chapter 5 covers mineralogy of the sediments. This is divided into two parts. (1) Heavy mineral and light mineral studies and (2) clay mineralogy. Chapter 6 deals with the geochemistry of Vembanad lake and mud bank sediments. Chapter 7 gives the summary and the conclusion of the study. Figures and Tables are given in the Appendix.