Acknowledgement

With deep sense of gratitude I express my sincere thanks to my guide Prof. (Dr.) K. Sankaran Unni for his expert guidance and critical suggestions rendered during my research. I am fortunate to work under him and his constant encouragement enabled me to complete the work successfully.

I express my heartfelt thanks and indebtedness to Dr. A. P. Thomas, Director, School of Environmental Sciences, Mahatma Gandhi University, Kottayam for permitting me to work in the School and for providing all necessary facilities, especially the Centralized Remote Sensing and GIS facility, for the research work. He has been a vital source of encouragement not only for my research work, but for shaping my academic vision and career also.

I bow before the treasured memories of late Dr. R. Satheesh, who inspired me a lot for carrying out my research and it was he, who made me what I am. Of course, this work is dedicated to my beloved Satheesh sir.

With immense pleasure, I express my sincere thanks to Shri. C. Vasudeva, Director in charge of Mining and Geology for rendering the support throughout my study. I take this opportunity to express the words of gratitude to Shri. N. Krishnakumar, former Director of Mining and Geology, who gave tremendous encouragement to my work.

Special thanks are due to the following personalities, who helped me a lot during the process of my work by extending their expertise. I am deeply indebted to Dr. P. K. K. Nair (ERRC, Trivandrum), Dr. J. S. Guleria (Birbal Sahni Institute of Palaeobotany), Dr. K. Anupama (French Institute of Pondicherry), Dr. C. M. Nautiyal (Birbal Sahni Institute of Palaeobotany), Shri. Benny Josep (Govt. College, Nattakom), Shri. Joseph Sebastian (GIS Consultant), for providing the technical expertise and critical attention. The expertise rendered by the GIS Consultants Shri. Nishad Narayan, Shri. Shijo Josep, Shri. SamVarghee and Shri. Santhosh Kurian is also gratefully thanked. Dr. M. P. Nayar (ERRC, Trivandrum), Dr. C. G. Nambiar (CUSAT, Cochin), Dr. Jayaprakash V. Thomas (ISRO, Bangalore), Dr. Kananakshen Kkkel (KSCSTE) and Dr. Girish Gopinath (CWRDM, Kozhikode) are sincerely acknowledged for their help and support.

I place on record my heartfelt thanks to Dr. A. A. Mohammed Hatha (Cochin University of Science and Technology) and Dr. E. V. Ramasamy (School of Environmental Sciences), who have treated me as their younger brother and given immense enthusiasm at each stage of my work.

The invaluable care, affection and encouragement extended by Shri. M. Krishnan, Shri. A. G. Korah, Shri. C. K. Bajaj, Shri. Thomas Josep, Shri. N. Krishnamoorthy, Shri. T. V. Nardanan and Shri. Sathish
Chandran Nair of the Department of Mining and Geology during my work period is gratefully acknowledged. My colleagues and Assi. Geologists, especially Shri. Jagadishan K. R., Dr. H. Sabeen, and Dr. Manulal P. Ram, always have an encouraging attitude and gave suggestions to make this work a successful one.

My source of inspiration always was my beloved teachers and well-wishers. I sincerely thank Prof. S. Sivadas, Dr. K. P. Joy, Dr. Babu Antkat, Dr. P. V. Vijayan, Dr. A. V. George, Dr. T. V. Muralivelathan, Dr. H. Krishna Iyer, Prof. K. Radhakrishnan Nair, Prof. Thomas Mathew, Prof. Shirley AnniCommen, Prof. Lekha Nair, Dr. PurnaKurian, Prof. Jajo JosephValiarikaran, Prof. Joby Joseph, Prof. Johnkutty Ozhukayil, Dr. Tony Augustine, Dr. K. V. George, Dr. AbrahSamuel, Prof. Kurian John, Shri. K. S. Mangalakrishnan, Shri. Roy Joseph, Shri. Saji George, Dr. K. N. Krishnakumar, Prof. S. S. Anilkumar, Shri. P. K. Sajicchan, Shri. K. M. Thomas, Shri. V. G. Vijayakumar, Shri. ShibuK. Maria and Shri. P. P. Krishnan, who encouraged me at different stages of my life. I remember with gratitude the help rendered by the staff of the School, namely, Shri. Saju Thomas, Shri. Prakash D, Shri. Mohamed Kurju, Sri. Annamma V.I., Sri. Salubudin P.O., Sri. Samsh Kuman K.T. and Shri. Subhash T. K.


I am indebted to Shri. Babu Thomas Pukkel, Shri. S. A. Sabrudi, Shri. Thomas Chazhicheril and Shri. Jojo John, who have helped me a lot during my field work.

I am particularly thankful to my Adhan Anna, Appachi, Chattan, Chettathy, Aliyan, Chechi, Shyam Santhany, Sweety and Sooya for their understanding and encouragement. The incident which thrown light into the idea of channel rearrangement of Meenachil River was happened at the sacred Sooyakalady Mana, Kottayam and I bow before the grace of Lord Vinayaka for imparting the idea in my mind.

AJAY KUMAR B.