

**Final Year Project Report
Advanced Diploma in Civil Engineering
MARA INSTITUTE OF TECHNOLOGY
SHAH ALAM**

**COASTAL EROSION
ANALYSIS AND MITIGATIVE MEASURE
A CASE STUDY OF PANTAI SABAK KELANTAN**

BY

**MOHD AZLAN BIN HAMID
NOVEMBER
1993**

ACKNOWLEDGEMENT

The author would like to express his sense of gratitude to the Project Advisor En Kamaruzaman Wan Yusoff and En Mohd Najib Abdullah for their continuous advice and guidance throughout the preparation of the project.

Special thanks are due to the Hydec Engineering Consultant, Ir. Muhammad Akhir Othman and En. Ahmad Mustapha for supplying the vital facilities, informations and guidance required for the project.

Thanks to Pengarah JPS Kelantan, Timbalan Pengarah Bahagian Pantai, Ir. Mohd Zaki Mat, Ir. Zainal Fitri, JPS Tumpat staff and JPS Headquarters Coastal Department, Ir. Zainal Akmar and En. Mohd Najib for the facilities, ideas and co-operation throughout the whole project.

Also thanks to author's family, all colleagues and staff of Civil Department who directly or indirectly contribute to the preparation of the project.

ABSTRACT

Human activities in the coastal zone and a physical infrastructure which, in case of improper understanding of the coastal system can have a dramatic effect on the coastline.

The geomorphology and shoreline development of the Kelantan coast (Pantai Sabak as a case study) are ^{discussed} and the causes of erosion are analysed as a basis for the evaluation of various possible defence schemes in that area.

In this respect, the use of DANISH HYDRAULIC INSTITUTE' coastal software package LITPACK as a dedicated modelling tool in coastal engineering practice is demonstrated.

By knowing all of these problems, recommendations for future coast erosion management of Pantai Sabak can be made.

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1.0 INTRODUCTION

1.1 GENERAL

Malaysia has a total land area of 329,750 sq. km. with a very long coastline of 4425 km. Coastal erosion occurs at many location along coastline of Malaysia. The stretches of coast affected by erosion ranges from 0.02 km to 5 km. Coastal erosion had led to damages to public and private property besides the loss of land which could have been utilised for useful purposes. In addition, it is also believed that the eroded material could also be the cause of many siltation problems at river mouths, fishing ports and harbour.

Some erosion (and accretion) in coastal of Malaysia is man-related, a large part is natural phenomenon. Erosion and accretion are shoreline responses to natural coastal process. Development of coastal areas to serve important economic and social need often interferes with those processes causing the shoreline to respond differently and to alter the erosion and accretion patterns. Coastal erosion affects every state in Malaysia as it occur along more than 1300 km of Malaysia shoreline. In eroding areas, the average rate of shoreline retreat ranges from less than one meter per year to more than 100 meter per year.

The consequences of coastal erosion are generally a result of inadequate planning and siting of facilities. Most of the erosion consequences would have been avoided had the causes of coastal erosion been better understood. Continued siting of facilities in eroding coastal areas aggravate the coastal erosion problem unless developers adequately consider erosion causes and consequences.