MUDDY SUBSTRATES OF MALAYSIAN COASTS

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CHAPTER 1: INTRODUCTION
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MALAYSIAN SHORELINE

Report produced by Stanley Consultant in 1985 (Yap & Adnan 1991) showed that Peninsular Malaysia had 1,963 km of coastline while Sarawak and Sabah had 1,035 and 1,802 km, respectively. As of December 2013, the length of Malaysia coastline was 4,675 km of which 2,068 km for Peninsular Malaysia and 2,607 km in East Malaysia (CIA World Factbook 2013). This represents 2.76% shrinkage or the loss of 125 km of shoreline within 26 years, with 5.35% increase in Peninsular Malaysia and 8.11% decrease in East Malaysia.

Plate 1.1: Coastal erosion and accretion are common phenomena at the Malaysian coastline, at times capable of turning a land into sea or causing sand movement and creating ridges

It is very interesting to note that the west coast of Peninsular Malaysia is muddy with patches of stony rocks while the east coast is relatively very sandy. The difference is highly attributed to the impact of the larger South China Sea on the east coast and the narrow Straits of Malacca on the west. However, the whole series of East Malaysia coast is a mixture of sandy, muddy and rocky shores. With this respect, selected coastal zones of Peninsular Malaysia have been put on alert by the Drainage and Irrigation Department (JPS), Malaysia. It seems that the west coast has more vulnerable areas classified as Category 1 which is termed as a state of erosion and where shore-based facilities or infrastructure are in immediate danger of collapse or damage.

Naturally, erosion and accretion occur alternately, governed largely by wind and wave directions. While some coastal areas are vulnerable, a number of stretches are calm. At the Intergovernmental Panel on Climate Change Workshop held in Kuala Lumpur on 21 June 2011, the Ministry of Natural Resources and Environment of Malaysia alerted that 29% of the Malaysian coastal areas are vulnerable to serious erosion (Abdul Ghani 2011). There is an increasing trend of whopping and aggressive wave incidences at the South China Sea and the eastern part of Andaman Sea which affected the Malaysian coasts.