

Impact Modeling for Coastal Projects in Malaysia

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Abstract

A proposal is put forward to develop some 480 acres of land in Southern Johore, Malaysia into an integrated development comprising commercial, industrial and residential zones. A mandatory Environmental Impact Assessment (EIA) is undertaken as part of the approval procedures as stipulated by the Environmental Quality Act 1987, Malaysia.

This paper presents the results of a modeling analysis conducted as an integral component of the EIA. Numerical models (USEPA WASP5) and analytical models are used to assess hydrologic and hydraulic parameters in the estuarine coastal zones relevant to the study. Major environmental concerns relate to the discharge of sewage, organic and industrial waste as well as the release of suspended solids from soil erosions. Modeling results provide insights into the effectiveness of proposed mitigation measures deemed adequate to fulfil designated water quality standards in the receiving waters. Model results also provide suggestions for future monitoring program to ensure satisfactory compliance with statutory requirement.