Preliminary modelling assessment of hydrodynamic simulation due to Terengganu Airport runway extension

ABSTRACT

Coastal erosionis a naturally phenomenon occurring result of the coastal hydrodynamic process. It is referring to the process of diminution, crafting and unloading of materials in coastal areas by agents such as waves, wind and tides. Erosion process becomes faster when there is activity on the waterfront development. To identify potential erosion caused by development, a study was conducted at the Terengganu Airport Runway extension. In this study, numerical modelling analyses were conducted to represent hydrodynamics using MIKE-21 software. The MIKE-21 is a comprehensive coastal modelling of software that simulates hydrodynamic, wave action, wind and tides. Modelling data input were obtained from National Hydraulics Research Institute Malaysia (NAHRIM) for the period of November 2009. Collected marine data were used as base for model calibration. Model calibration is with-in the acceptable confident level. Then, the calibrated model is used to predict the potential impact due to the Kuala Terengganu Airport runway extension.