Abstract

Akram S Soliman

Evaluation of Numerical Model for the Design of Artificial Submerged Reef

Shore erosion is considered one of the major problems not only in Egypt coasts but also around the world coasts, mainly due to excessive human activities (e.g. construction and development works along coastline),and /or due to natural factors (e.g. wind, wave, current and sea level rise). In recent years, most of the scientific investigations are looking for new techniques, which can be used to reduce the rate of coastline erosion and even add new beaches. These commonly techniques are friendly acting to the environment. Submerged breakwaters are constructed from rubble mound and plain concrete materials however other cheaper materials and systems were introduced. One of these alternatives is geo-textile tube technology this technique is becoming one of the most effective, cheapest and most friendly options for developing countries (Oh and Shin, 2006). In this study, a numerical model “MIKE 21” of DHI Water & Environment Morphological Modeling System is applied. The result of numerical model “MIKE 21” was validated using other numerical models and experimental data. Details of the validation results were presented and discussed.