ABSTRACT

Directed to the planning and execution of landings in Amphibious Operations, this study aims to select and test some parameters and models which can lead to the morphodynamic and beach type characterization and that may be used in the estimate or description of the beach-shoreface system topography; to check the behavior of waves in shallow waters using a refraction model; to analyze the suitability of the equilibrium profile concept for obtaining indications about the bathymetry in areas with access restrictions; and to analyze the hazards associated to each type of beach, under different morphodynamic conditions. The field research was carried out in Barra and Souto beaches, in the South coast of Espírito Santo, between September 2001 and November 2002, including five topo-bathymetric surveys, in a sequence of six profiles along the beach, together with observation of oceanographic parameters, sediment sampling in some stations along the profile and in a grid covering the whole shoreface and the inner continental shelf. The models and parameters for classification of beach types from Wright & Short (1984), Sunamura (1984) and Muehe (1998) were analyzed, as well as other type indicators. For the refraction, the NSW module from Mike21 program (DHI) was adopted, and, for obtaining the equilibrium profile the equations of Dean (1977), Dean et al. (1993) and Komar&McDougal (1994) were used. The results, compared to the field data, showed the satisfactory adjustment of the refraction data meanwhile the prediction accuracy depends on a precise bathymetry; for the above mentioned objective, the equilibrium profile concept wasn’t considered applicable; and, the information provided by the morphodynamic models and parameters proved to be useful to the planning the landings meanwhile it depends on getting data and observations for long term.