

The importance of the topo-hydrography in the prediction of the short- and medium-term evolution of the coastal zone

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Abstract: The prediction of the short- and medium-term evolution of the coastal zone is performed when it is necessary to estimate the future hydro-sedimentologic behavior of littoral stretches, usually where interventions of rehabilitation and/or protection which need to be tested and evaluated are being planned. In this paper are presented the methodologies to predict the evolution of the coastal zone out of inlets presently applied in LNEC. These methodologies are based on the application of mathematical models of hydrodynamics and sediment dynamics suitable to the time and space scales to which they are applied. The objective of this paper is to point out the fundamental importance of the topo-hydrographic data to obtain prediction results through these methodologies. Two international case studies in which these methodologies were applied aiming to obtain rehabilitation solutions for two beaches in critical erosion condition are presented.

Palavras chave: evolution, prediction, morphodynamics, shoreline, beach