

Coastal Erosion Control Alternatives with Geosynthetics: Study Case of Ponta Negra Beach, Natal, Brazil

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Abstract : There are several alternatives of coastal erosion control with geosynthetics. As an important stage of any Civil Engineering project, literature review is necessary in order to evaluate these alternatives and to guide the decisions. Ponta Negra beachfront has a very intensive urban pressure. In addition, a very short sand area induces high intensity erosion processes. Different attempts of solving the problem were already built. However, erosion issues are still an important concern since these structures collapsed. Geosynthetics present a great potential to be applied in this area. In order to study coastal erosion control alternatives with the use of geosynthetics, this paper presents a literature review about this subject. Several studies were collected in which beach conditions are similar to those found in Ponta Negra beach. It was possible to evaluate the alternatives that might be used in the area. Further studies include the application of such techniques in pilot areas and the evaluation of the erosion process. Finally, the best alternative for futures studies on Ponta Negra beach is geocontainers of geotextiles.

Keywords : geosynthetics, coastal erosion control, alternatives, Ponta Negra beach

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