

An Extreme Event as a Game Changer in Coastal Erosion Management - DTU Orbit (09/11/2017)

An Extreme Event as a Game Changer in Coastal Erosion Management

The construction of hard protection measures along the northeast coast of Sealand, Denmark, has gradually led to profile steepening, loss of beaches, and increased storm erosion. Although the problem has been addressed for decades no common solutions have been implemented yet. However, the impact of cyclone Xaver in December 2013 with severe coastal erosion led to collaboration between the involved municipalities to work on a coherent solution for the entire coastline that involves sand nourishments, renovation and optimization of hard protection structures, and the restoration of recreational values. We present a concept of 'erosion pressure' as a simple method to estimate potential chronic (longshore) and acute (cross-shore) erosion on protected coasts. The erosion pressure estimates are reliable at the investigated coast and the concept has proved useful for dissemination to stakeholders about coastal dynamics.

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