

MOIN CONTAINER TERMINAL

COASTAL ZONE MANAGEMENT STUDY

APM Terminals is constructing a new container terminal close to the existing port of Moín. In the design phase several morphological studies were performed pointing out two main spots of erosion; 1) close to the Moín river mouth and 2) west of the terminals causeway.

The monitoring and mitigation plan, described in the Environmental Impact Assessment (EIA 2014), states that a corrective plan needs to be developed when the threshold of erosion of 600 m³/m is reached. This threshold was exceeded in 2016.

The Moín Container Terminal is located in a formerly stable embayed beach which is sheltered from NW waves by a small island and the harbor dams of the Port of Moín. Moín river flows out next to the existing port bringing a seasonally varying amount of sand into the system.

Svašek Hydraulics has developed a coastal zone management plan associated with Moín container terminal. The purpose of this plan is to propose, analyse and assess the effectiveness of various mitigation measures to reduce the coastal erosion that has occurred as a result of the construction of the Moín container terminal.

In the coastal zone management plan several different measures to mitigate the post construction erosion are investigated.

As a first step some empirical assessments of the coastline deformation in cross and alongshore direction are made. E.g. establishing the closure depth and the equilibrium coastline orientation.

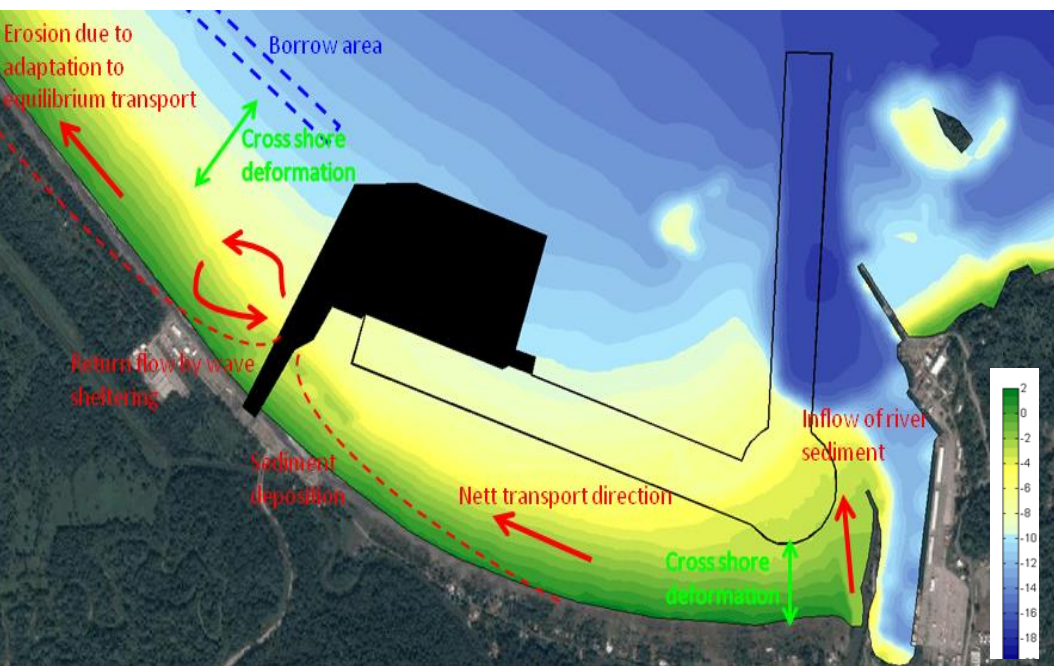
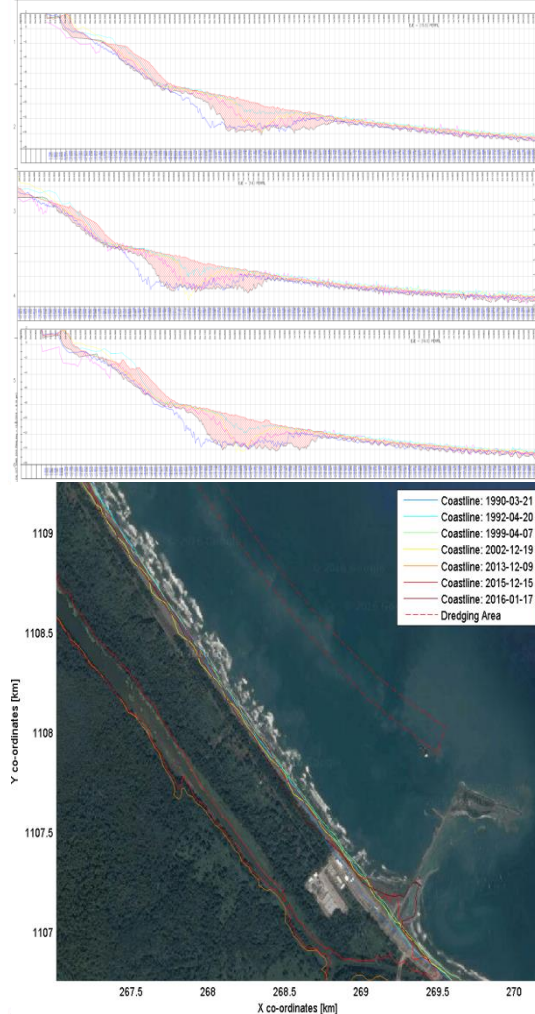
Next different nourishment schemes for the erosion on the west side of the terminal were investigated with the process based morphological model FINEL2D. The most viable solution was modeled for a period of 20 years.

CLIENT
APM Terminals

LOCATION
Moín, Costa Rica

DATE
2016

SERVICES
Morphological Effects Study
Nourishment Strategy Development
FINEL2D



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