

**PROJECT**

3D numerical modelling of the dispersion of the Ribeira waste water treatment plant discharge.

**LOCATION & COUNTRY**

A Coruña, Spain

**CLIENT**

EPTISA  
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**PARTNER**

**DATES**

October 2012 - November 2012

**ACTION MODULERS' MAIN TASKS**

Implementation, calibration and validation of MOHID Water model.  
Analysis of different scenarios.

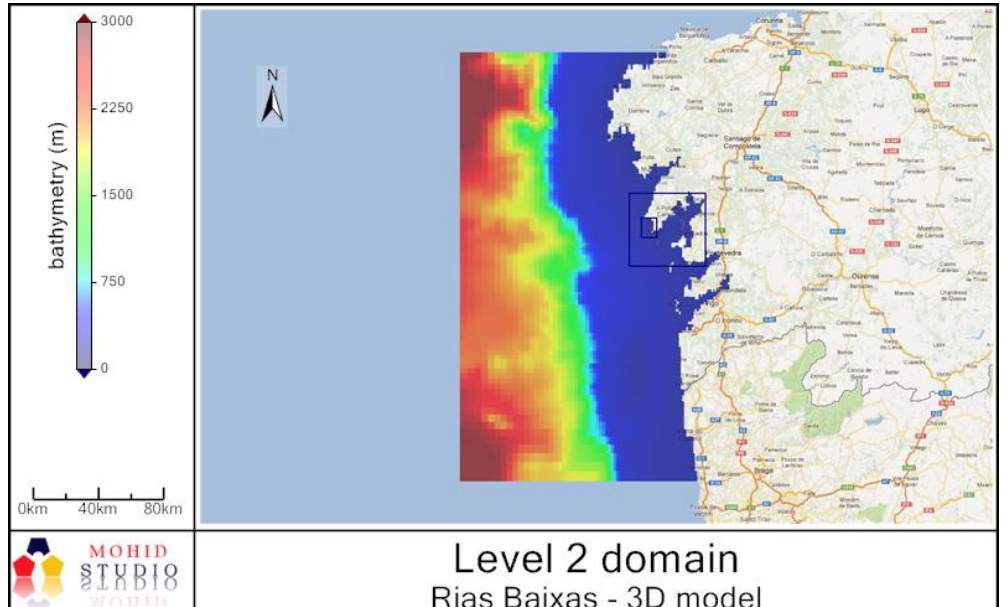
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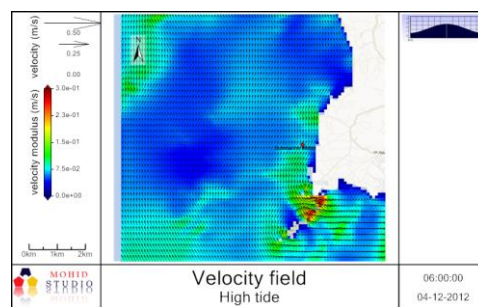
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# Numerical modelling of a discharge of a submarine outfall

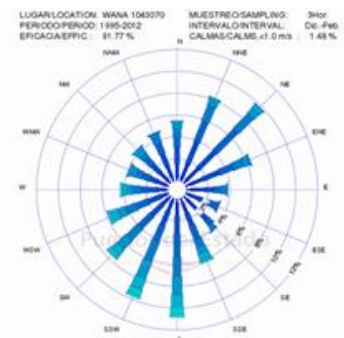


In this project a 3D numerical modeling study has been performed on the dispersion of the Ribeira (A Coruña, Spain) waste water treatment plant (WWTP) discharge, using MOHID Water Modelling System.



The aim of the study is to describe and quantify the WWTP effluent plume dispersion (made via a submarine outfall). The model computes the initial dilution of the outfall jet via a near field integral model: MOHIDJet. Several scenarios were simulated using for different values of outfall flows and of

waste water treatment. Winter meteorological conditions, deemed as the most conservative for dispersion, due to the low availability of solar radiation and thus lower faecal contamination mortality rates were used.



A nested modelling approach has been used, downscaling hydrodynamic conditions from the SW Europe to a very high resolution grid in the study area.