

SINERGEA – Intelligent System to Support the Efficient Use of Resources and the Inundation and Coastal Contamination Emergency Management in Coastal Cities

Summary

The R&D SINERGEA Project targets an intelligent platform for decision support of the integrated and optimized management of energy, bathing water quality and inundation in coastal cities.

Framed in a smart city view, this platform will simultaneously allow to: 1) contribute to city energy efficiency through minimization of drainage infrastructures' energy consumption; 2) protect urban beaches by preventing bathing waters' contamination by urban discharges; 3) contribute to urban flood events' risk management.

Based on innovative ICT methods, the system will provide real-time proposals for optimized infrastructure operation measures, merging real-time forecast and monitoring of the full water cycle (atmosphere, catchment, urban and coastal areas) and energy, pre-defined environmental scenarios and operational alternatives. This generic tool, XHQ SINERGEA, customizable to the challenges of different end-users and interconnected water bodies, will be demonstrated in the city of Albufeira (Portugal) and its nearby coastal area.

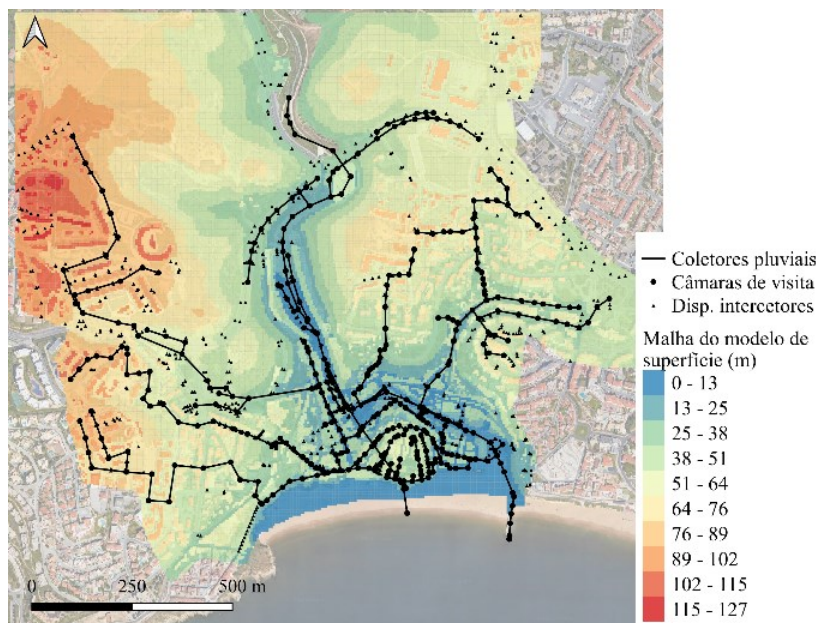


Figure 1. Storm drainage infrastructure and surface grid considered for MOHID Land/SWMM coupling in Albufeira.



Project Reference

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Leading Institution

SIEMENS, SA (Portugal)

Partners

LNec – National Laboratory for Civil Engineering (Portugal), IST – Instituto Superior Técnico (Portugal), UAlgarve – Universidade do Algarve (Portugal), Águas do Algarve (Portugal)

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CERIS

66 595.40€

Project Website

sinergea.lnec.pt/index.html