Innovative modelling approaches for predicting Socio-environmental evolution in highly anthropized coastal lagoons

Fact Sheet

Project Information

SMARTLAGOON
Grant agreement ID: 101017861

Funded under H2020-EU.1.2.2.

Start date 1 January 2021
End date 31 December 2024

Overall budget € 3 981 907,50
EU contribution € 3 972 313,71

Coordinated by FUNDACION UNIVERSITARIA SAN ANTONIO Spain

Project description

New tool to monitor Europe’s lagoons

Objective
Coastal lagoons are ecosystems with great environmental and socioeconomic value. However, these natural systems are especially vulnerable to climatic and anthropogenic pressures, such as intensive agriculture and extensive urbanization as a consequence of the tourist development. Despite the vulnerability and complexity of these ecosystems, there has been limited development of novel techniques which can provide real-time monitoring, analysis and management of these critical resources. Beyond being useful for policy-making procedures at multiple levels of granularity, these tools can increase local and citizen awareness of environmental impacts. SMARTLAGOON project intends to develop a digital twin to build a systemic understanding of the socio-environmental inter-relationships affecting coastal lagoons and their ecosystem. It will digitally replicate the policy-making procedure of these complex socio-environmental systems by combining, analyzing and interpreting data from different sources; including efficient in-situ IoT infrastructures with edge computing capabilities that reduce the overall system’s carbon footprint, remote sensing technologies, social media sensing, open-data repositories and data from human behavior, economics and the social sciences, by making recourse to advanced AI, NLP, physically-based and citizen science models. As a case study, SMARTLAGOON focuses on the Europe’s largest salt water coastal lagoon, i.e. Mar Menor (Murcia, Spain), which has suffered serious environmental degradation due to several socio/environmental reasons. We will jointly develop our tool with citizens, stakeholders and policy-makers of this area to address their needs and requirements, following an agile methodology to ensure practical and useful results for this particular scenario in the first instance and extend to other coastal lagoons in the second instance.

Fields of science

Programme(s)

Topic(s)

Call for proposal

H2020-FETPROACT-2020-2

Funding Scheme
Coordinator

FUNDACION UNIVERSITARIA SAN ANTONIO

Address
Avda Jeronimos Campus
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30107 Murcia
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Activity type
Higher or Secondary Education Establishments

EU contribution
€ 687 875

Website
Contact the organisation

Participants (7)

UNIVERSITAT POLITECNICA DE VALENCIA

Spain

EU contribution
€ 537 212,46

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Activity type
Higher or Secondary Education Establishments

Website
Contact the organisation

WATERITECH APS

Denmark

EU contribution
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8660 Skanderborg

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

UPPSALA UNIVERSITET

Sweden

EU contribution
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<td>Norway</td>
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<td>Gaustadalleen 21, 0349 Oslo</td>
<td>Research Organisations</td>
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<td>PHOTRACK AG</td>
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Activity type
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