Case Study

PORTS4ALL: TRANSFORMING PORTS INTO MARINE OASES

CHALLENGE

The PORTS4ALL project is an industrial research activity that aims to offer a comprehensive multi-technological solution with the aim of transforming gray infrastructures (such as ports) into blue infrastructures (marine oases) through the restoration of degraded and polluted spaces, the recovery of lost biodiversity and finally strengthen the fight against climate change.

ADASA'S SOLUTION

The technological members of the consortium (Catalan Water Partnership, Eurecat, Seastainable Ventures, GPA Seabots and Adasa) are researching in three different areas that, combined, will allow a comprehensive solution to address the aforementioned challenges:

- **New technologies such as 3D printing of CaCO3, or electrolysis and sedimentation systems** for the generation of CaCO3 that are the basis of metallic structures that mimic nature, creating micro-reefs and BioWalls in 3 dimensions that allow building and regenerating new habitats and biodiversity .
- **Autonomous and remote control system for the collection**, interpolation and visualization of marine data and the generation of heat maps of the different indicators.
- **Advanced systems based on Machine Learning and Artificial Intelligence (ML-AI)** for the prediction of sewage discharges in the port area and how this can affect the water quality of the ports.
- **Virtual sensor system for the extraction of key indicators** (biodiversity growth, oxygen generation and carbon sequestration) to help monitor biodiversity.

RESULT

This project will mean an improvement in terms of sustainability in the ports that concentrate the greatest pollution and environmental impact. In addition, the project will represent an advance in economic development in the field of the Blue Economy.

CLIENT

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