



**Social-Ecological Ocean Management
Applications with Digital Ocean Twins**

Advancing Sustainable Ocean Management
through Socio-Ecological Digital Twins

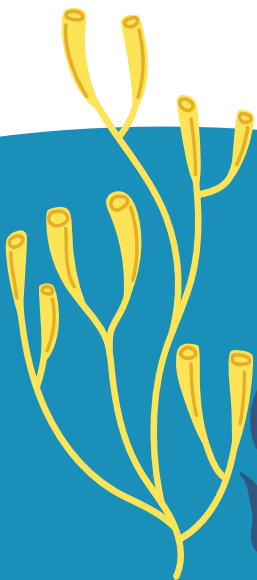
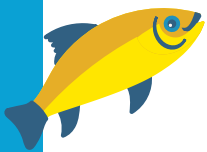
Newsletter Issue 1

Welcome to the First SEADOTS Newsletter!

We would like to announce the launch the very first edition of the SEADOTS newsletter! The aim of the newsletters is to keep you informed about our progress, milestones, and the inspiring work our partners are doing to advance sustainable ocean management.

SEADOTS – Sustainable Ecosystem-based Approaches through Digital Ocean Twins is a Horizon Europe project that brings together leading European research organisations, industry, and policy stakeholders. Our mission is to create next-generation Digital Ocean Twins (DOTs) that integrate socio-ecological and socio-economic data to support better, science-based decision-making.

Our work aims to provide **actionable, real-time insights** to help policy-makers, industry leaders, and local communities make informed choices that protect marine ecosystems and sustain the livelihoods that depend on them.



Project Objectives & Vision



SEADOTs aims to:

- Integrate socio-ecological and socio-economic models into operational DOT platforms.
- Deliver user-friendly tools with relevant and timely information for stakeholders.
- Support marine policy implementation through data-driven decision-making.
- Build capacity and foster collaboration between science, policy, and local communities.

Our Vision:

A future where Digital Ocean Twins empower societies to manage ocean resources sustainably, ensuring healthy seas and resilient coastal communities for generations to come.

The Challenge & Our Solution



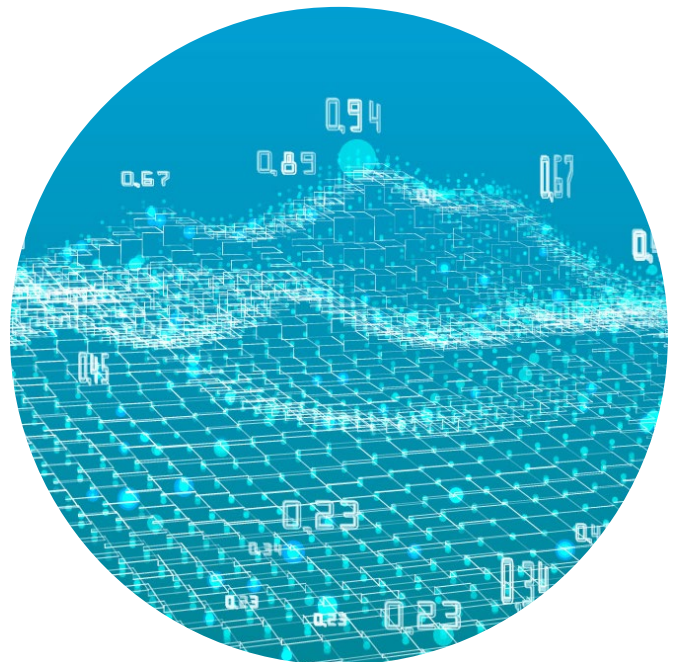
The Challenge

Oceans face increasing threats from overfishing, pollution, habitat degradation, and climate change. Current management approaches often lack integrated, real-time data, leading to fragmented decisions and missed opportunities for sustainable development.



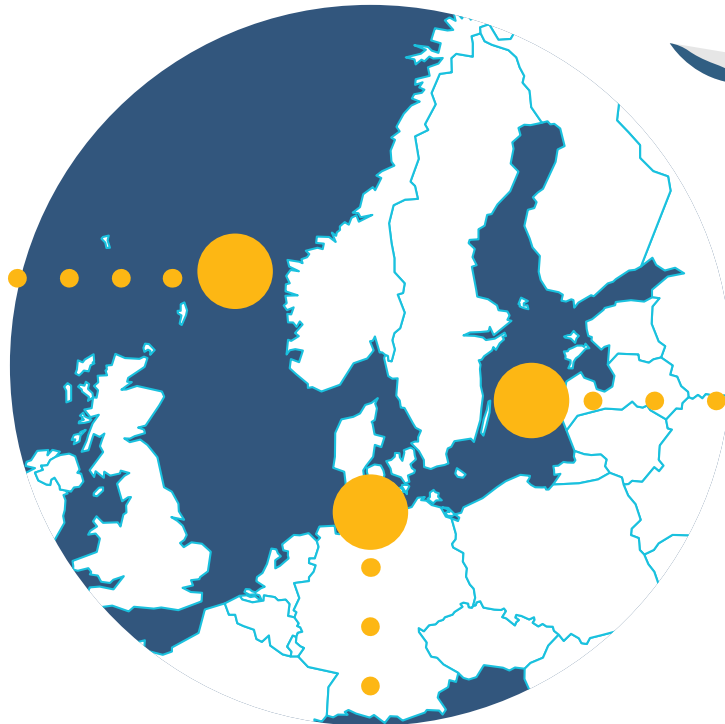
Our Solution

SEADOTs develops **advanced Digital Ocean Twins** that bring together oceanographic, ecological, and socio-economic data into a single, holistic model. These platforms will provide real-time, scenario-based insights, enabling coordinated, evidence-based policy and management actions.



Demonstrators

To make sure our solutions work in real-world conditions, SEADOTs will test them in three pilot areas, each with its own challenges and opportunities:



Norwegian North Sea

Here, we will explore how Digital Ocean Twins can support **sustainable fishing** and prepare for **climate change impacts**.

This means using real data on fish stocks, water temperature, and ocean conditions to help balance fishing needs with ecosystem protection.

Southern North Sea

This region is a hub for **offshore wind farms** and other renewable energy projects. Our pilot will focus on understanding how these developments affect marine life and local economies, helping decision-makers plan energy growth while protecting the environment.

Baltic Sea

The Baltic suffers from **eutrophication** (too many nutrients in the water) and declining biodiversity. This pilot will test how Digital Ocean Twins can help reduce pollution, restore habitats, and protect wildlife, while also considering the needs of local communities and industries.

Each pilot will test and refine our Digital Ocean Twins to ensure they meet real-world needs and deliver tangible benefits for diverse stakeholders.

News & Events



Between 16-19 June, 2025, the SEADOTs project had the opportunity to take centre stage at the **Blue-Cloud 2026 Joint Workshop**, held in the context of the **OCEANS 2025 Conference**. The workshop, co-organised by the EU-funded **Iliad** and Blue-Cloud 2026 projects, brought together leading initiatives under the Horizon Europe umbrella that are contributing to the integration of socio-ecological models into the **Digital Twin Ocean (DTO)**.

 [Read more](#)

On June 18th, 2025, the SEADOTs project proudly participated in the “SH-wide Digital Twins of the Ocean Symposium” held at **GEOMAR Helmholtz Centre** for Ocean Research in Kiel. The event brought together an inspiring community of researchers and professionals dedicated to advancing the field of **Digital Twins of the Ocean (DTO)**.

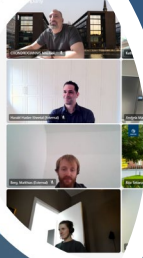
 [Read more](#)



SEADOTS

SEADOTS Virtual Workshop & GA in March

13 - 14 th March, 2025
Online



From March 13th to 15th, the **1st Virtual Workshop & GA Meeting** of the SEADOTs project was held online to evaluate the project's progress and outline the next steps. This two-day online workshop featured a structured agenda, including interactive parallel sessions that enabled partners to delve deeply into specific project topics.

 [Read more](#)

The **European Ocean Days** is an annual event organized by the European Commission, bringing together scientists, policymakers, industry leaders, and stakeholders to collaborate on solutions for ocean protection and restoration. Held in Brussels, this year's event convened 67 Mission Ocean projects, fostering discussions on **digital innovation, marine restoration, and sustainable ocean governance**.

 [Read more](#)

SEADOTS

SEADOTS project participated at at European Ocean Days

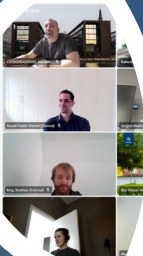
3 - 5 th March, 2025
Brussels, Belgium



SEADOTS

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From 15-17 January 2025, Trondheim became the epicenter of cutting-edge **offshore wind research** and innovation at the prestigious EERA DeepWind Conference. Since its inception in 2004, this annual event has consistently showcased groundbreaking advancements in bottom-fixed and floating deep-sea wind farms, cementing its status as a key platform for **collaboration and knowledge exchange**.

 [Read more](#)

Meet the Consortium

SEADOTs unites leading European research institutes, universities, and industry partners, blending science, technology, and policy expertise. Together, we bring the skills needed to create Digital Ocean Twins that are scientifically robust, practical, and impactful for both marine ecosystems and the communities that depend on them.

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