



The Digital Twin_s of the Ocean



Webinar

Torsdag 22. juni 2023, kl. 15:00

PROGRAM



**DIGITALE
TVILLINGER
AV HAVET
I NORGE**

Velkommen og introduksjon til Iliad

Bente Lilja Bye, BLB

**Erfaringer fra samarbeid med IOC-UNESCO og
deling av industridata**

Jo Øvstaas, HubOcean

Statens kartverks havdata og produkter

Njål Tengs-Hagir, Statens kartverk

Introduksjon til met.no havmodeller

Marta Trodahl, met.no

Hypso-1 - norsk satellitt for havdata

Esmee Oudijk, NTNU

Diskusjon/Discussion



Støttet av
Forskningsrådet

BLB



SINTEF



NTNU

HI IR Ocean



Introduksjon til Iliad - digital twins of the ocean

Bente Lilja Bye, BLB

Bente is Innovation Manager in Iliad - Digital Twins of The Ocean and expert on data management and capacity development

Iliad's Digital Twin of the Ocean provides a virtual environment representing the ocean, capable of running complex, predictive management scenarios. The innovative system integrates across discipline, sensors, models, and digital infrastructures.





Enabling an ecosystem of **interoperable digital twins** for the ocean trough:

- Connecting to *existing* ocean data infrastructures
- Enhance ocean data infrastructures with *additional* observation technologies and **citizen science**



Create an open **marketplace** accessible for all providers and users by:

- Development of *innovative methods* in open frameworks and platforms
- Enable model *evaluations & comparisons* for many Earth science applications from weather, energy, aquaculture to climate and more



Provide **solutions** to address future societal challenges by:

- Assembling a broad and diverse *user community* of existing and new users,
- Supporting the communities in testing and using the project's *innovative technological solutions*

ILIAD DIGITAL TWINS OF THE OCEAN



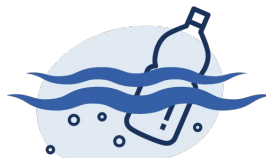
Existing Wind Farm Capacity



Ocean Energy Potential



Coastal Sediment Transport



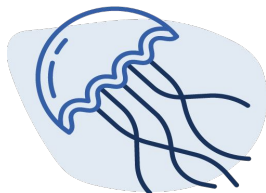
Plastic Pollution Monitoring



Oils Spill Simulation



Insurance For Marine & Maritime Activities



Jellyfish Swarm Forecast



Harbour Safety



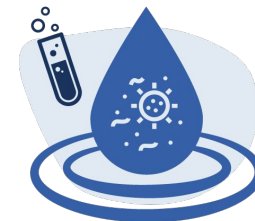
Met Ocean Hind, Now & Forecast



Fisheries Productivity & Sustainable Aquaculture



Ballast Water Monitoring



Aquaculture & Harmful Algae, Water Quality & Ship Traffic



ILIAD numbers

▶ Full name: Integrated Digital Framework for Comprehensive Maritime Data and Information Services

▶ Coordinator: Netcompany-Intrasoft

▶ Grant Agreement No: 101037643

▶ Project start date: 1. February 2022

▶ Project end date: 31. January 2025

▶ Duration of project in months: 36

▶ Overall budget: 18 956 630 EURO

▶ EU contribution: 17 046 230 EURO

▶ Partners: 56 + 2 linked third parties



ocean-twin.eu

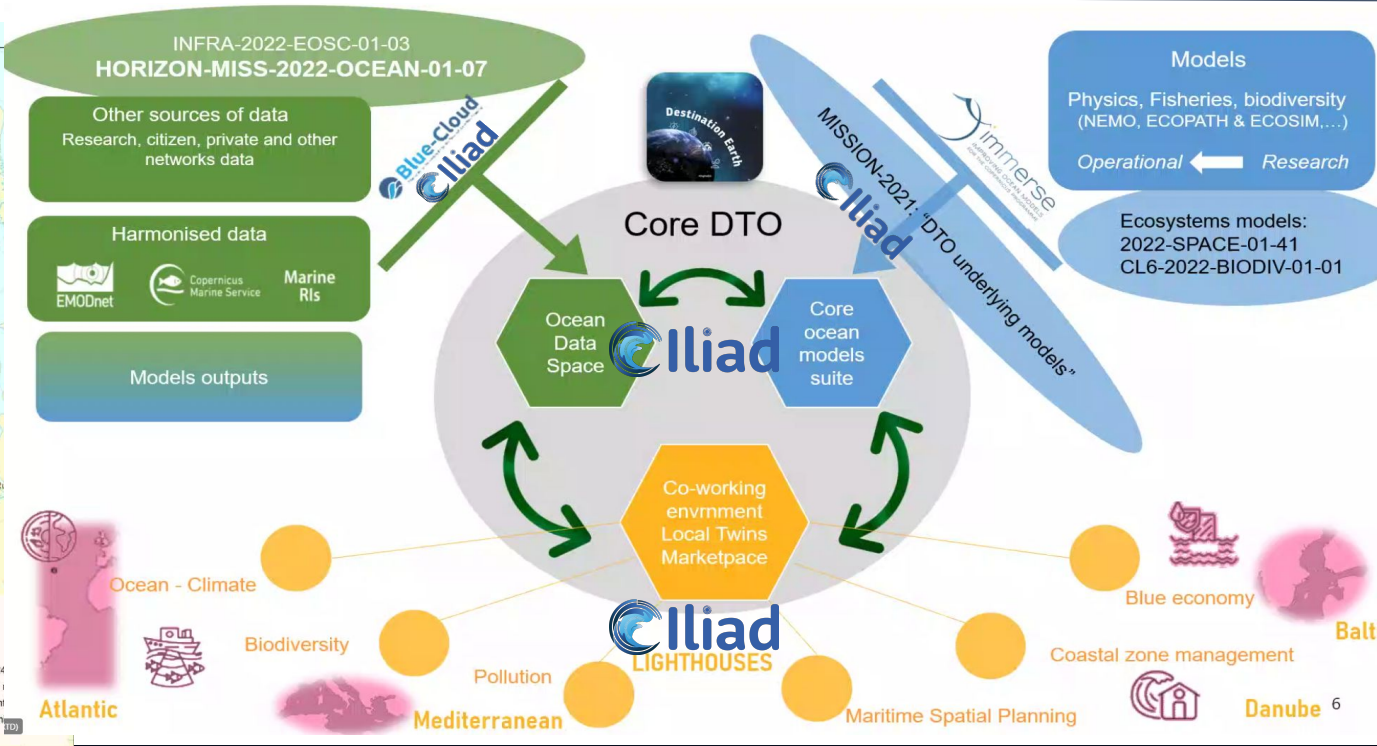


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ILIAD Norge, Europa og verden



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DIGITALE TVILLINGER AV HAVET I NORGE

Norske ressurser



Kartverket

BLB

SINTEF



NTNU

HMR Ocean

MØT EKSPERTENE



Erfaringer fra samarbeid med IOC-UNESCO og deling av industridata *Jo Øvstaas, HubOcean*

Jo works with platform/data-innovation at HUB Ocean, a non-profit foundation aiming to become the global hub for ocean data collaboration. With over 20 years of experience at DNV, Jo is an expert in data, technology, and collaboration. Passionate about improving ocean resource management, he holds an MSc in Marine Engineering from NTNU.

Statens kartverks havdata og produkter

Njål Tengs-Nagir, Statens kartverk



Njål works with partnerships and ventures locally, nationally, regionally and globally. Marine Spatial Data Infrastructure is the key needed to unlock the Power of Where. He strongly believes that we must establish close cooperation with stakeholders, customers and partners to establish coherent data supply chains where Norway's national marine and maritime data are core components in the digital ecosystem for business development and management. He is definitely thinking outside the box.



Introduksjon til met.no havmodeller

Marta Trodahl, met.no

Marta Trodahl works as a researcher at The Norwegian Meteorological Institute. Her work mainly concerns ocean model development and operationalization. She is passionate about science communication and visualization.

Hypso-1 - norsk satellitt for havdata

Esmée Oudijk, NTNU



Esmée Oudijk is a Ph.D. candidate at the Norwegian University of Science and Technology in Trondheim in the department of Engineering Cybernetics. Her passion is to find a sustainable way to monitor the oceans, because she firmly believes that only if water is monitored and managed wisely it is possible to combine the needs of human activities and ecosystems in a sustainable way. Her work focuses on combining numerical ocean modelling and (hyperspectral) satellite data to overcome temporal and spatial gaps in satellite data and errors in ocean modelling