



Lunchtime conference: "What is multi-use at sea?"

From concepts to demonstrators, for sustainable use of seas, sectors “dialogue”, and 2030 targets

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Ocean Seas and Waters*

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Multi-use in EU FP research & innovation

Reduce the installation, maintenance, operational costs and environmental impacts by combining several activities (“traditional”, renewable energy 2050 targets - 460 GW offshore wind, aquaculture, maritime logistics services...) in the same marine space, Solve the demand for marine space from different activities in crowded areas

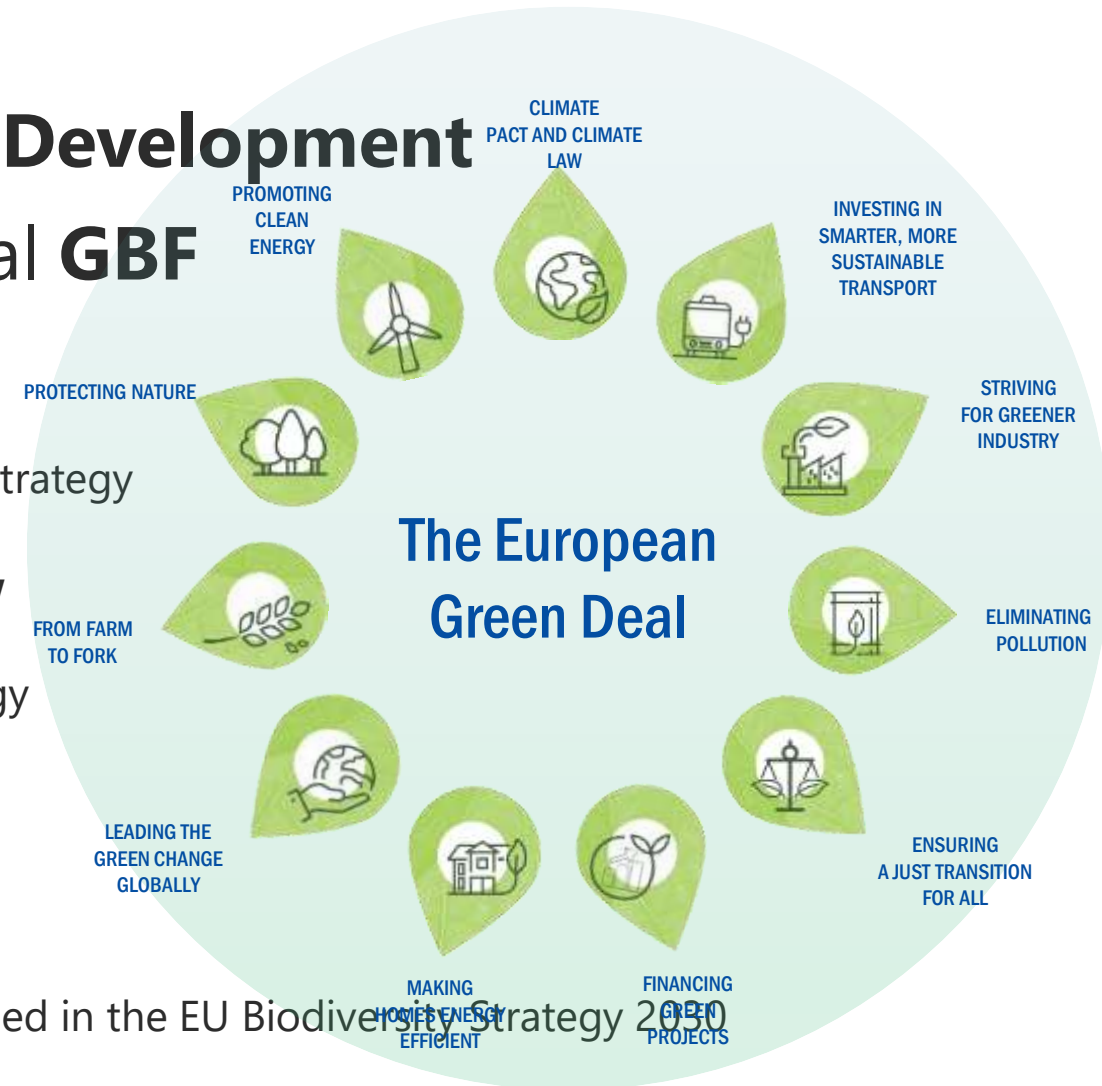
- **FP7 call ‘The Oceans of Tomorrow’ 2011**: designs and technological concepts for economic and environmental benefits in combining activities (MSFD + MSP implementation). **H2OCEAN** : ORE for H2 production, aquaculture / **TROPOS** modular concept for offshore conditions / **MERMAID** aquaculture and energy production MPP driven by site-specific environmental conditions
- **H2020 Blue Growth topics 2014 2016 2017** assessed regulatory & financing barriers (liability, insurance, environmental concerns, stakeholder perceptions, skills...) for different combinations of activities in co-location, MUS / MPP (**MARIBE** and **MUSES**) and technological barriers (**Space@Sea** and **The Blue Growth Farm**)
- **H2020 2019 topic for demonstrators** in real environment of the economic, social and environmental viability of at least two combined economic activities, business plans, health & safety issues, local communities, training & skills. **MUSICA** and **UNITED**



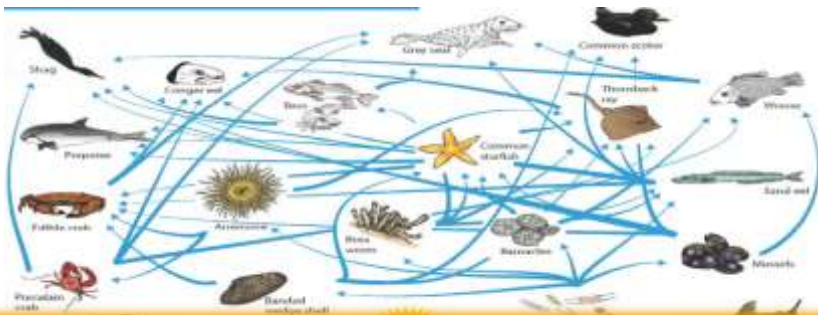
Policy context

- The **2030 Agenda for Sustainable Development**
- From Aichi to the Kunming-Montreal **GBF**
- The **European Green Deal**:

- EU **Biodiversity** strategy 2030,
 - **Zero Pollution** action plan
 - **Farm to fork** strategy
 - Renewed **sustainable finance** strategy
 - ... and more
 - **Climate adaptation** Strategy
 - European **Climate Law**
 - **Blue Economy** strategy
- And promote and build on MSFD, IMP & MSP, HBD included in the EU Biodiversity Strategy 2030



Sequential topics for Marine biodiversity & ecosystem services

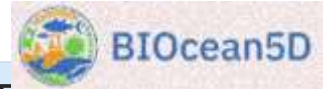


The huge missing actionable knowledge on ecosystems components: species, functioning, connectivity, mapping

2021

Understanding and valuing coastal and marine biodiversity and ecosystems services - 29M€

BIOCEAN5D - To deliver key new biological/ecological data, Essential Ocean Biodiversity Variables and ecosystems functioning models, 150+ sites of exploration along EU coastline



MARBEFES - ecological, economic and socio-cultural valuation tools using existing and new knowledge & data in 12 Broad Belt Transect case studies from the Arctic to semi-tropical areas, from shallow to deep areas



2021

Assess and predict impacts of cumulative stressors on coastal and marine ecosystems and their - 17M€

GES4 SEAS

GES4SEAS – Tool for risks assessment and adaptive Ecosystem-Based Management (EBM), including new methods, biologging, satellite, (eDNA), for different ecosystem components, including management of HABs, jellyfish and invasive species

ACTNOW - understanding of Cumulative Impacts on European marine biodiversity, ecosystem functions and services for human wellbeing



The missing actionable knowledge on cumulative drivers impacts on ecosystems. thresholds, risks asstmt for management and planning

HE Cluster 6 Destination 1

Sequential topics for Marine biodiversity & ecosystem services

Demonstrating planning built with state-of-the-art knowledge, updated from previous projects on biodiversity structure / function

2021

Demonstration in coastal and marine ecosystems for restoration and resilience in simplified socio-ecological systems - 9M€

Marine SABRES – demonstration of Social-ecological systems-thinking and Ecosystem-Based Management in three Demonstration Areas (Tuscan Archipelago, the Arctic North-East Atlantic and Macaronesia) with multi actors approach



2021

Improved science based maritime spatial planning and identification of marine protected areas - 10M€

MSP4BIO – develops and demonstrates the ways in which knowledge-based MSP becomes a vehicle and a tool for the protection and recovery of ecosystems



MarinePlan - tools and knowledge to align MSP and marine protected area (MPA) designation processes, which are lacking particularly regarding transboundary coordination and connectivity.



MPA Europe - holistic measures of biodiversity to encompass variation within and between species and of ecosystems as well as carbon cycle dynamics and climate change scenarios



European Commission



EUROPEAN UNION

**Mission
lighthouses:**
sites to pilot,
demonstrate,
develop and deploy
the Mission
activities across EU
seas and river
basins



Baltic & North sea basin



**MAKE THE BLUE
ECONOMY CARBON-
NEUTRAL AND CIRCULAR**

Mediterranean sea
basin



**PREVENT AND ELIMINATE
POLLUTION OF OUR
OCEAN, SEAS AND
WATERS**

Danube river basin



**PROTECT AND RESTORE
MARINE AND FRESHWATERS
ECOSYSTEMS AND
BIODIVERSITY**

Atlantic & Arctic coast





Mission Calls in WP2021, WP2022 and WP2023



Objective 1

PROTECT AND RESTORE

Marine and freshwaters

Blue Parks

IAs:

- MPA management,
- degraded ecosystems,
- marine habitats

Danube lighthouse

Lighthouse CSA

IAs:

- restoration of river connectivity,
- wetlands,
- management of sediments

Atlantic & Arctic lighthouse

Lighthouse CSA

IAs:

- coastal restoration,
- climate and human activities threats to marine biodiversity

Cross-basin topics, IAs

- natural lakes
- landscape water retention capacity

Objective 2

PREVENT AND ELIMINATE POLLUTION

IN OCEAN AND WATERS

Mediterranean lighthouse

Lighthouse CSA

IAs :

- prevention, reduction and elimination of plastic & litter,
- prevention; reduction and elimination of chemical pollution,
- nutrient pollution in the landscape-river-sea system

Cross-basin topics, IAs

- plastic free European rivers,
- low environmental impact fishing gear

Objective 3

MAKE THE BLUE ECONOMY CARBON- NEUTRAL AND CIRCULAR

Baltic & North Sea lighthouse

Lighthouse CSA

IAs:

- sustainable aquaculture and multi-use of marine space
- bringing algae-based products on the market

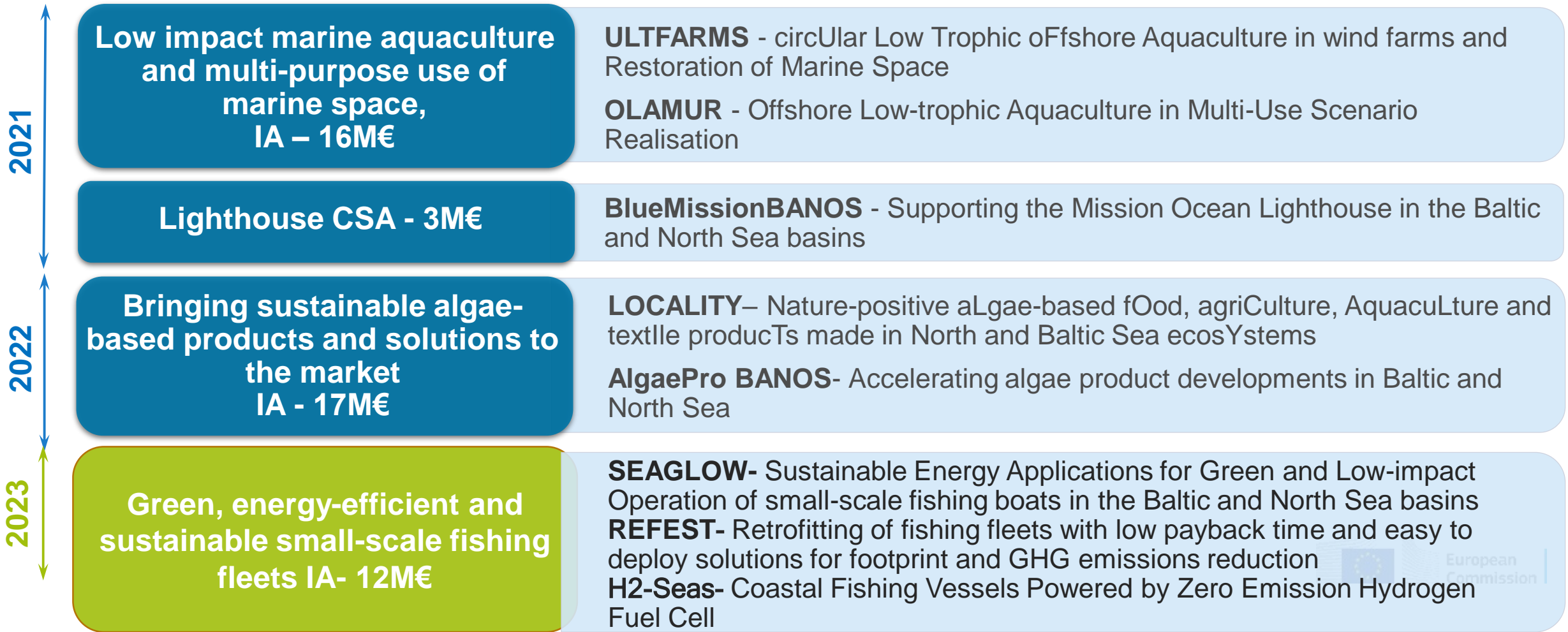
Cross-basin topics, RIAs

- offshore renewables
- repurposing aged/unused offshore infrastructures

Objective 3



Baltic and North Sea lighthouse Portfolio of projects





1. DTO Science Base

Sustainable Blue Economy Partnership Intervention areas

The five co-designed Intervention areas below have been the basis for the first joint call, next in Feb / march 2025



Development and validation of **Digital Twins** of the Ocean at sub-sea-basin scale



Blue generation **marine structures**



Planning and managing sea uses



Healthy '**Blue Food**' under a 'One Health' approach



Enabling the green transition of '**Blue Food**' production



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Thank you!

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