EU MISSIONS
RESTORE OUR OCEAN & WATERS

BLUE MISSION BANOS

Supporting the Mission Ocean Lighthouse in the Baltic and North Sea Basins

3rd MISSION ARENA

26-27 November 2024

Amsterdam

REGIONAL FOCUS ARENA 3

The Netherlands
BELGIUM
DENMARK I West
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EU MISSIONS
RESTORE OUR OCEAN & WATERS

BLUE MISSION BANOS

3rd MISSION ARENA

26-27 November 2024 | Amsterdam

Connecting Seas: Cooperation and Tools for EU Marine Protected Areas Workshop

November 26th, 14:00-15:45 hrs

Hall 2

#MissionArena3

MPA Managers & Local Communities

Funded by the European Union

Overview of the session

1. Introduction
2. Projects Overview and Tools being developed
3. Points of Overlap and Complementarity
4. Opportunities for Cooperation and Discussion
5. Conclusion

INTRODUCTION

Mariana Mata Lara

SUBMARINER Network

INTRODUCTION

- MPAs play a crucial role in conserving marine biodiversity and mitigating climate change
- In Europe, MPAs cover approx. 12% of European seas an only about 1.5% is under strict protection – far away from the 30x30 goal
- Effectiveness is a problem – paper parks due inadequate funding and staffing for management, poor enforcement of regulations, conflicts with economic activities, lack of integration om MPAs with MSP, a need for easy-to-implement tools that help solve these problems, a lack of cross-collaboration both with local stakeholders and between MPAs managers and staff

INTRODUCTION

1) Introducing the MPA managers & local communities group

2) Deep-dive on the tools that are being developed by different EU funded projects and see how they can work together

MPA

Managers
& Local Communities

Project Overviews and Demonstration Sites

- Julian Burgos, BioProtect project, Marine and Freshwater Research Institute
- Inne Withouck, MSP4BIO project, Flanders Marine Institute
- Franziska Drews-von Ruckteschell, Blue4All project, SUBMARINER
- Luca van Duren, BLUE CONNECT project, Deltares
- Belinda Bramley, MPA Europe project, CLIMAZUL

BioProtect project

- 8 million €, 4 year project funded through the HORIZON-MISS-2023-OCEAN-01-03 call.
- Main objective: Development an **area-based management decision support framework (ABM-DSF)** to identify priority areas for conservation and support ecosystem-based marine spatial planning, including:

- Methods to engage stakeholders in co-design and decision-making.
- Strategies to map, monitor and forecast changes in marine biodiversity.
- Process to identify risks and adaptive measures to reduce pressures on marine biodiversity.
- Decision support tool (DST) for ecosystem-based conservation and restoration planning.
- Impact assessments of ecological and socio-economic consequences of management options.

Five demo sites: **Norway, Iceland, Ireland, Northern Portugal, Azores**

BioProtect

BioProtect's tools

Biodiversity toolbox

- eDNA autonomous biosampler for deep sea (1000m)
- Low-cost video cameras deployed from fishing vessels
- AI tools for analysis of underwater images
- VME-ID app for reporting VMEs on the field

- **CO_2 calculator** for fishing vessel emissions
- **PPGIS analyser** for data collected through Public Participatory GIS

BioProtect

BioProtect's tools

- **Predictive models** of key taxa and habitats under present and future conditions
- **Connectivity workflow** to identify ecological corridors
- **Multi-scale systematic conservation planning** to prioritize areas for conservation and restoration
- **Impact assessment** of proposed area-based measures
- **Marine planner** for co-design of solutions to reduce pressures on marine biodiversity

BioProtect

Blue4All project

Blueprint demonstration for co-created effective, efficient and resilient networks of MPAs

4-year project (Jan 23 – Dec 26) with partners from 13 EU Member States

Objectives

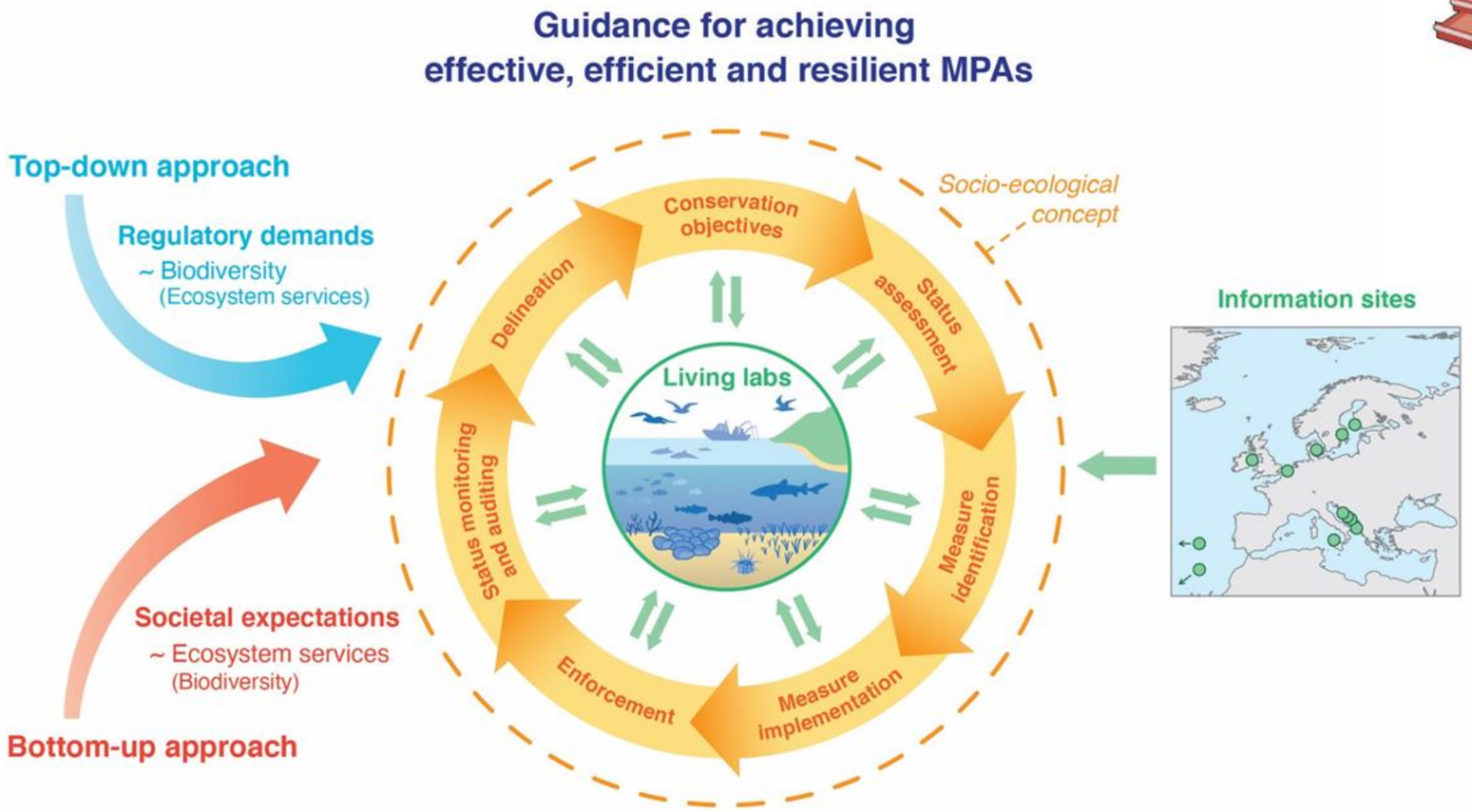
- Co-creation and testing of a **Blueprint platform** for MPAs
- Addressing the **challenges in the MPA process**
- Promotion of **a bottom-up approach** for MPAs while aligning with regulatory expectations
- Development and documentation of **new tools and strategies** for marine conservation challenges, including OECMs
- Support the achievement of **the EU Mission to restore our oceans and waters**

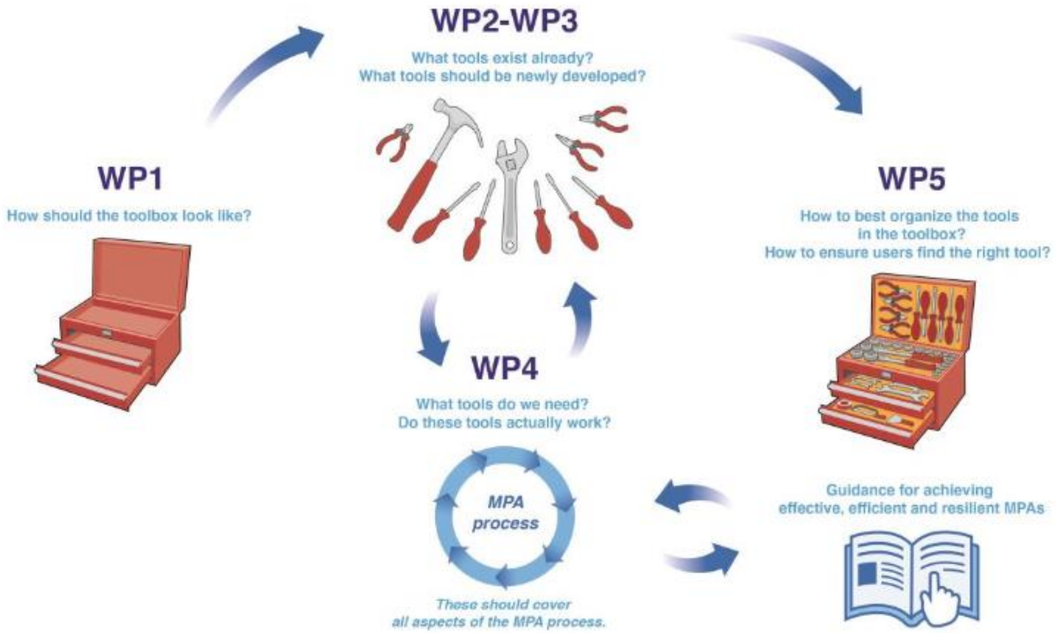
Blue4all

Blue4All project

Approach

Aligning regulatory demands with societal expectations





Through the creation of a toolbox (socio-economic and ecological tools)

Blue4All project

Case studies

- 4 EU Sea Basins
- 25 case studies:
  - 14 Living Labs
  - 11 Information Sites

Blue4all

Blue4All project

Key results

- Alignment of top-down regulatory demands with bottom-up societal expectations to achieve effective, efficient, and resilient (networks of) MPAs that meet EU Biodiversity Strategy 2030 objectives.
- Co-creation of robust and replicable social, governance, ecological, and environmental tools, mobilizing stakeholders from BLUE4ALL's 25 information sites and Living Labs.
- Testing of science-based tools in Living Labs.
- Development of an interactive web-based Blueprint Platform.
- Knowledge transfer and interaction to develop a platform for MPA networking to interact with communities of practice, ultimately leading to the development of a platform for effective, efficient, and resilient (networks of) MPAs and the restoration of oceans and waters.

Blue4all

Blue Connect project

The BLUE CONNECT is a Mission Ocean funded project that addresses the urgent need to protect and restore marine habitats and ecosystems and to reach ambitious EU and global protection and restoration targets by 2030.

Together with Marine Protected Area (MPA) managers, authorities, industries, and local communities from 12 Demonstration sites and beyond, BLUE CONNECT is co-developing, promoting, and demonstrating a systematic approach to marine conservation planning and management.

Photo: Elianne Dipp

BLUE CONNECT

ABOUT

BLUE CONNECT

- HE Ocean Mission Blue Parks project
- Innovation action
- Strategically building on the work done and impacting the 2nd phase of the Ocean Mission
- Supporting ambitious EU and global policies and their targets
- Transferability and scalability

4

SEA BASINS

25

PARTNERS

42

MONTHS

8 375 060

EUR

Objectives

- Develop and validate tools to support marine protected area designation, strict protection and restoration
- Strengthen the identification of ecological corridors
- Support the implementation of conservation
- Support effective monitoring and understanding of conservation effectiveness factors
- Establish innovative stakeholder collaboration and citizen participatory practices
- Exploitation and upscale

DEMONSTRATION SITES

PASSIVE RESTORATION

- New MPA designation/ expansion
- Shift to strict protection

- 2- Reserva marina de interes Pesquero de Cabo Roche, Cadiz, Spain
- 3- Pitusas Islands, Balearic, Spain
- 6- Italian Northern Adriatic, Italy
- 7- Burgas Bay, Bulgaria
- 8- Central Romanian Coast (Midia Cape - Aurora Cape)
- 9- Raet, Norway

INNOVATIVE MONITORING TECHNIQUES

To be defined (candidates: 9, 10, 11)

STAKEHOLDERS' ENGAGEMENT AND COLLABORATIVE MANAGEMENT

12- SAIS EBSA (transboundary)

- upscaling
  - ALL PILOTS

ECOLOGICAL CONNECTIVITY

1- Macaronesia
4- Cetacean Migration Corridor, Spain
11- Scottish MPA Network

ACTIVE RESTORATION

5- Albera, Spain
10- Vlaamse Banken MPA: Hinderbanks, Belgium

CONCEPT

Systematic approach to marine conservation and management

- **Hybrid modelling framework** for assessing different ecosystem functions and future scenarios
- **Ecological connectivity assessment** and integration in the framework
- **Pressure Impact analysis** in the Demo sites
- **Analysis** of effectiveness **and testing** of innovative **monitoring techniques**

Stakeholders cooperation and **citizen engagement**

Co-creation and **validation** in demonstration sites

- **Ecosystem-Based Framework** for definition of conservation objectives
- **Roadmap** with a toolkit **for identification of ecological corridors** in the EU Sea-basins
- **Governance Toolkit** for co-defining conservation measures
- An innovative and effective **stakeholder toolkit** for building active engagement and ownership
- **System for** monitoring and assessing **conservation effectiveness**

Development and implementation of a **Blueprint for conservation planning and management**

- **Scalable and transferable outputs** to be deployed across Europe
- **Feeding into compatible EU Platforms** - European Digital Twin of the Ocean and Knoewledge Systems

BLUE CONNECT

MSP4BIO

Improved Science-Based Maritime Spatial Planning to Safeguard and Restore Biodiversity in a coherent European MPA network

Aim: Develop and demonstrate the ways in which knowledge-based MSP becomes a vehicle and a tool for the protection and restoration of biodiversity

Partners:
18 partners, Lead: s.Pro

Duration:
36 months
1 August 2022-31 July 2025

Total budget:
3,490,500 EUR

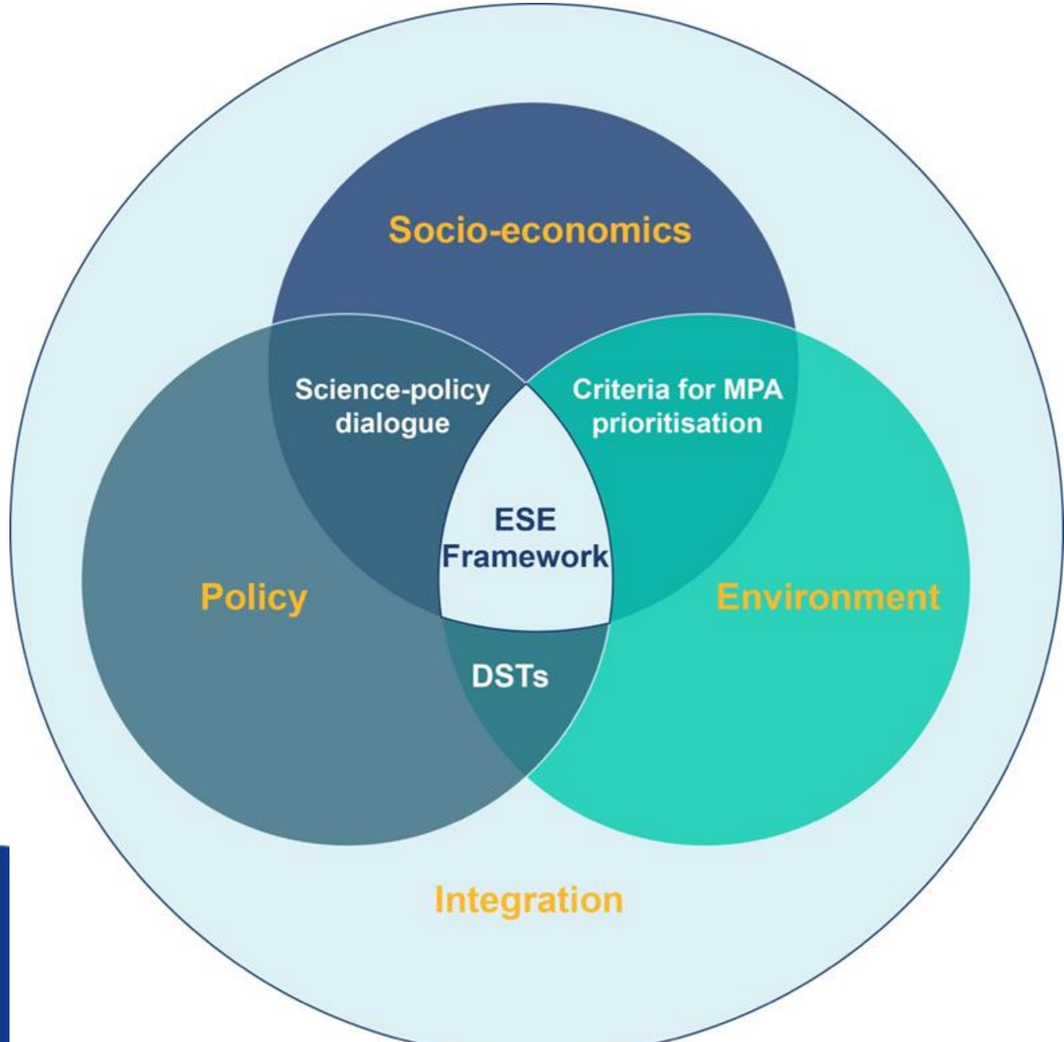
MSP4BIO pillars

Pillar 1 - Environment: MSP4BIO will improve the knowledge base and criteria for better prioritization of areas for biodiversity restoration and conservation.

Pillar 2 - Policy: MSP4BIO develops solutions that support coherent policy implementation and effective mainstreaming of biodiversity into relevant policies.

Pillar 3 - Socio-economic: Develop a framework for a more integrated and flexible strategic and spatial integration between MSP and MPAs that gets validated in 6 pilot sites in all 5 European Sea Basins.

Pillar 4 – Integration: MSP4BIO integrates the socio-economic considerations in MPA prioritization and management.



MSP4BIO test sites

NORTH SEA – BELGIAN AREA

Well studied and monitored area

Need for spatial strategy for pelagic biodiversity conservation

Need for geographical biodiversity assessments units

ATLANTIC 1 – GULF OF CADIZ

Hot spots with special needs for MSP and MPA

Need for improvement of MSP and stronger consideration of sea-land interactions in planning

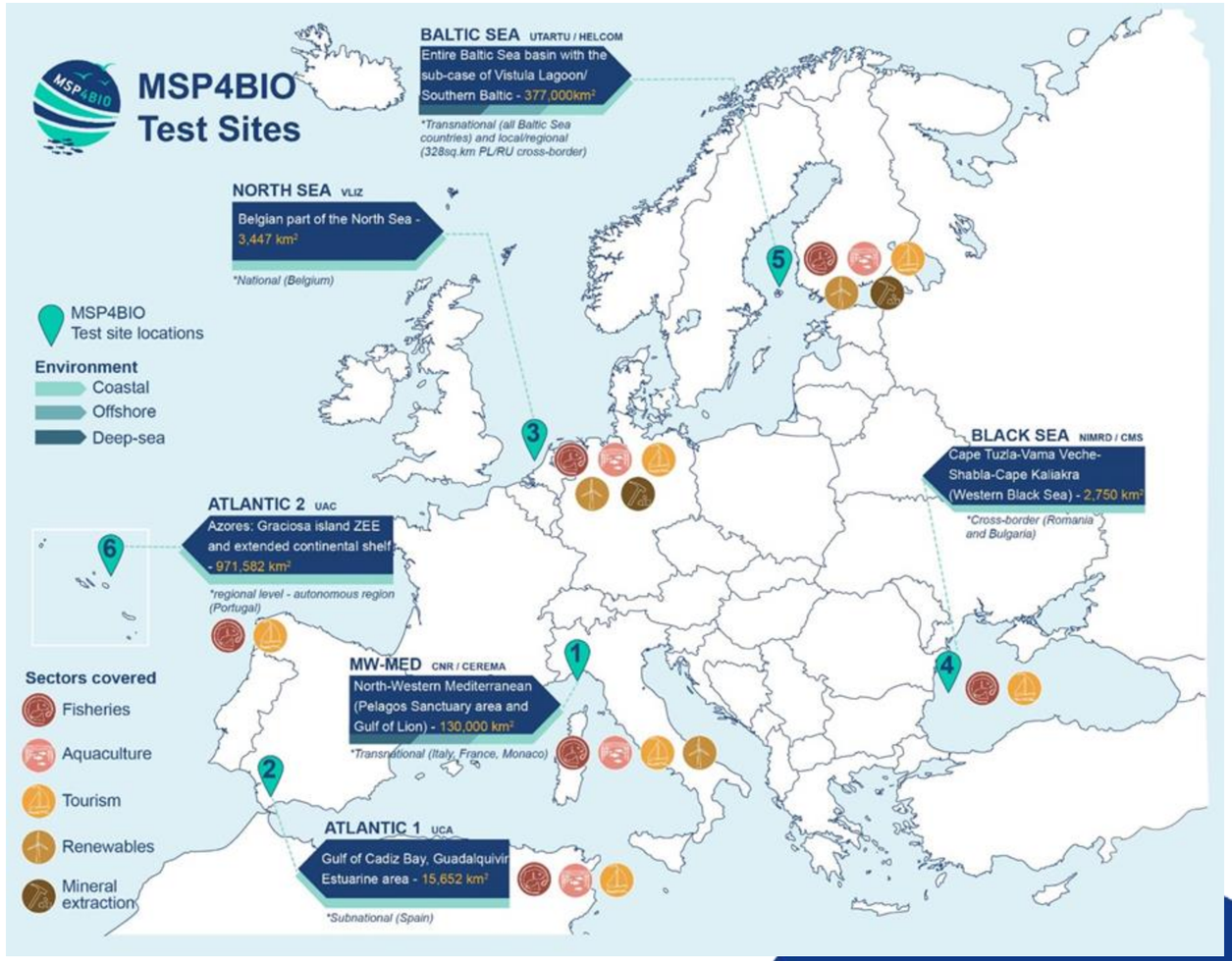
Human activities threaten MPAs in their vicinity

ATLANTIC 2 – AZORES (Graciosa Island)

Rich habitat diversity – knowledge gaps in offshore and coastal areas

Need for strategies to enlarge MPA network and for “fully protected areas”

No MSP approved yet



BALTIC SEA

Transboundary sea basin

Ecosystem under multiple human-induced pressures

Need for more MPAs designated areas to achieve the regional goal

Need for a coordinated plan for human activities

BLACK SEA

Cross-border area: 2 countries

Diversity of marine domains

MPAs Support huge biodiversity and ecosystem services

MPAs fragmented and do not have operational management

NW-MED

Governance complexity as area is shared between 3 countries

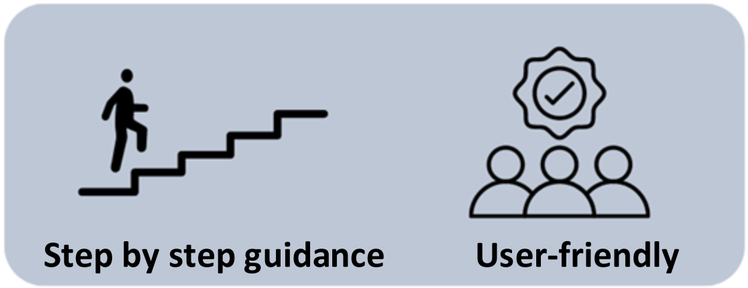
Large spatial scale

Diversity of marine domains

Multiplicity of human activities

MSP4BIO Ecological-Socio-Economic (ESE) Framework

The ESE framework consists of a **methodological guidance** that shall help **strengthening marine protection, eventually also in connection with MSP** through several methodological steps, and integrating social, economic, and ecological considerations



Main aim:

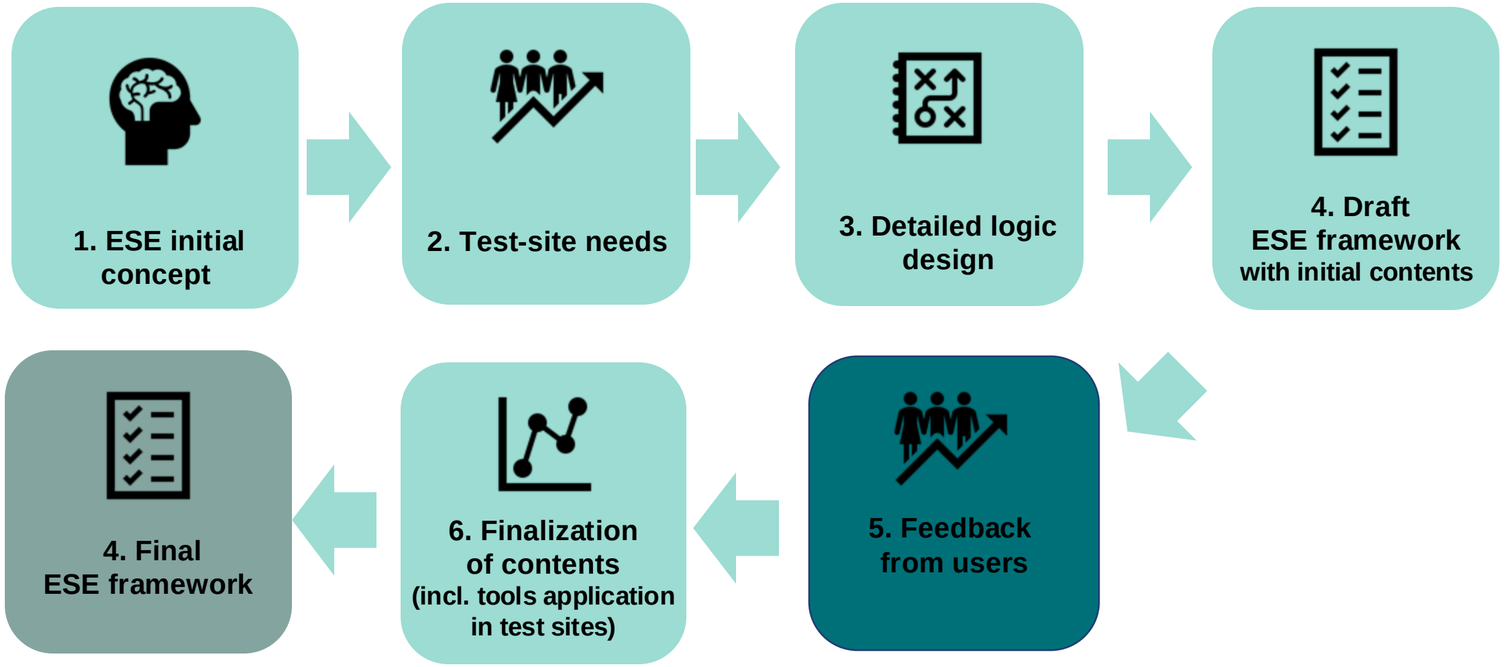
Identifies users´ **management needs through** a **portfolio of questions** that offers a wide range of **answers**

MSP4BIO Ecological-Socio-Economic (ESE) Framework

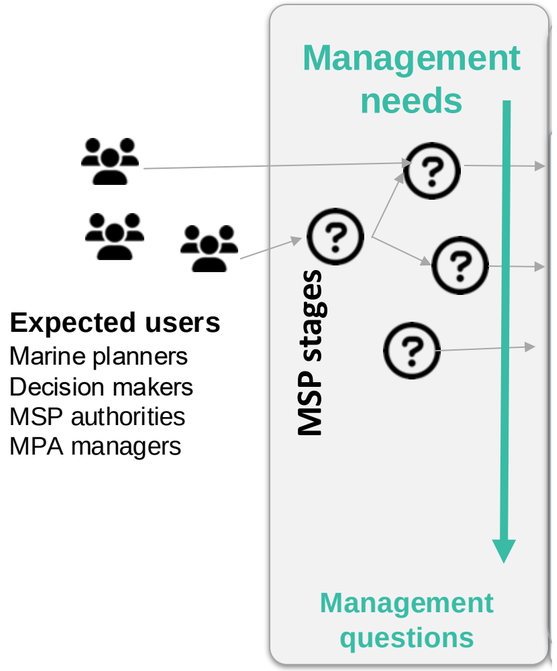
Users

- All users interested in identifying, prioritizing, designating and managing MPAs
- Planners
- MSP authorities, MPA managers
- Decision makers

MSP4BIO ESE Framework: users and their needs as a cornerstone

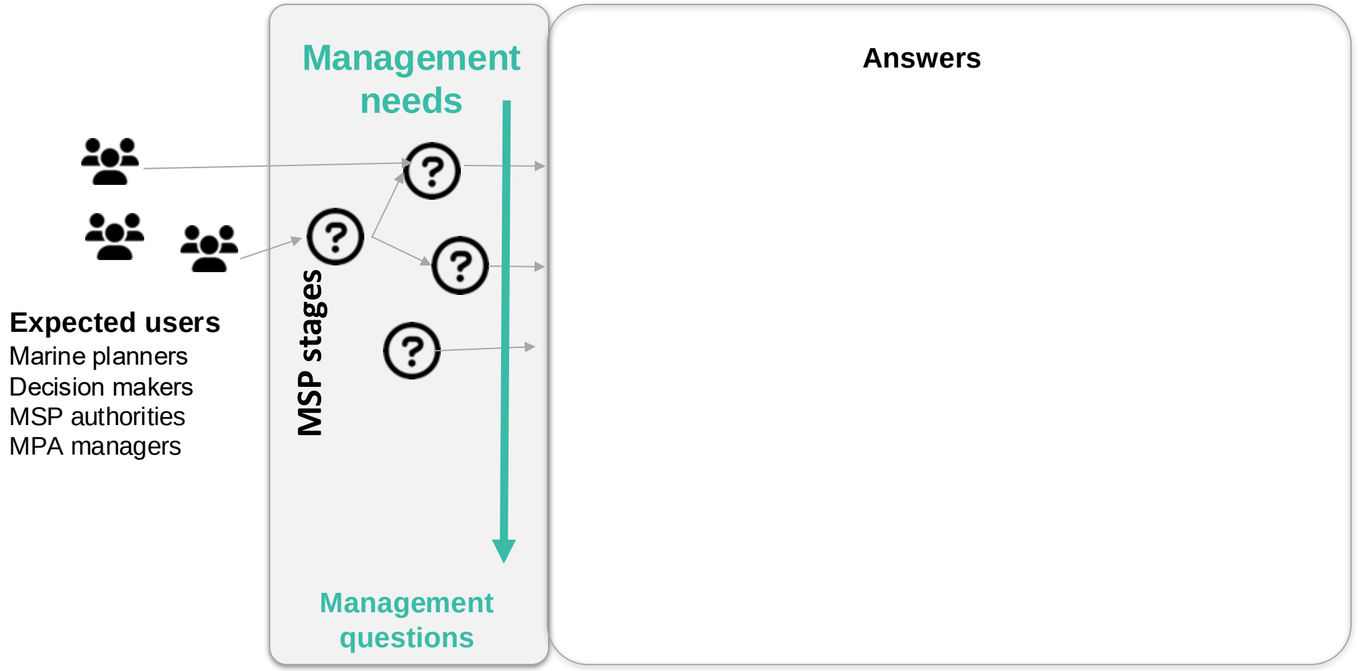


MSP4BIO ESE Framework: conceptual model

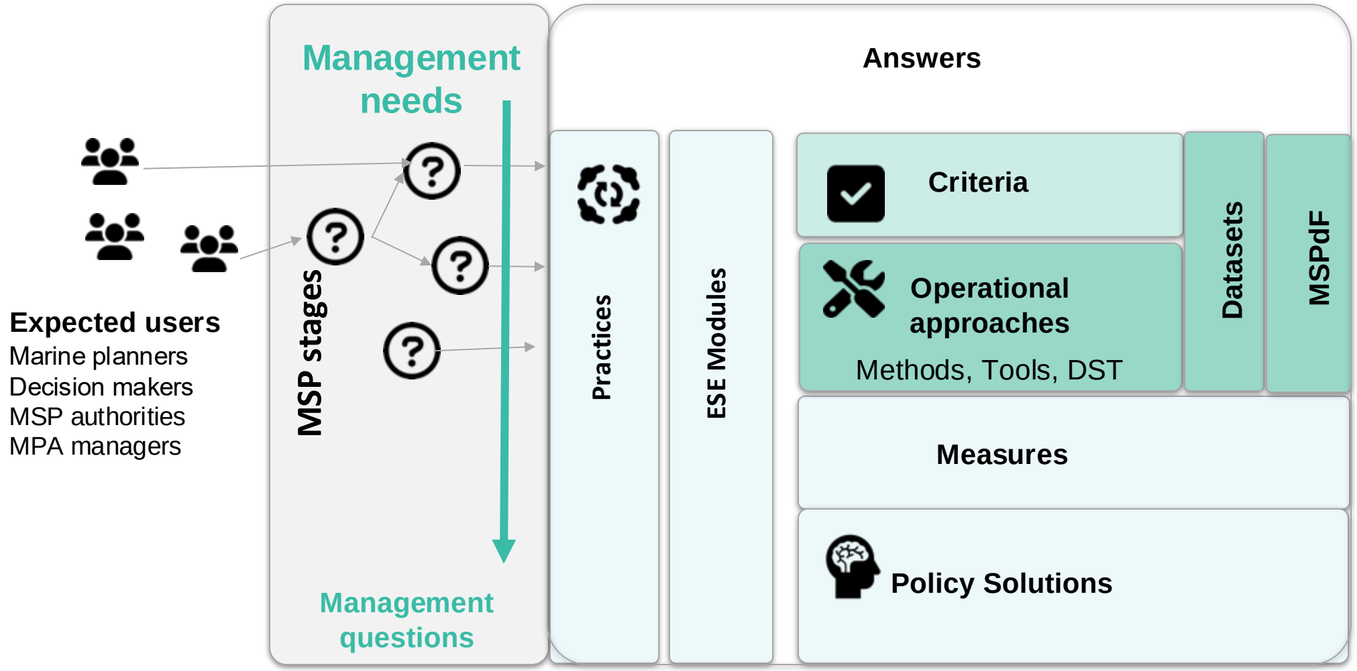


Guidance on formulating questions from general management needs to specific management questions

MSP4BIO ESE Framework: conceptual model



MSP4BIO ESE Framework: conceptual model



https://msp4bio.vliz.be/

MSP4BIO Data Compilation

Select Test Site(s)

☐ NW Med ☐ Cadiz ☐ Belgium ☐ W Black Sea ☐ Baltic ☐ Azores

MSP Data Framework Cluster

All

Select a Desideratum/Topic

- ◉ All
- ○ Ecological Traits
- ○ Connectivity
- ○ Trophic Ecology
- ○ Taxonomic Diversity
- ○ Climate Change

Show 10 entries Search:

	Dataset Name	Description	Accessibility	Spatial Coverage	Start	End
1	Birds Portal	Bird observations in Romania	To be requested	Romania	2019	2021
2	Dataset for the publication "Sources of uncertainty in future projections for the Baltic Sea"	Model simulation data from RCO-SCOBI as described in the publication "Sources of uncertainty in future projections for the Baltic Sea" and its supplementary material. Variables incl[illegible]perature, salini[illegible]	Open access	Baltic Sea		0
	South Iberian High Frequency					

MPA Europe project

MPA EUROPE IS MAPPING THE OPTIMAL LOCATIONS FOR MARINE PROTECTED AREAS IN EUROPEAN SEAS TO SUPPORT SCIENCE-BASED MARINE SPATIAL PLANNING

The MPA Europe project is co-funded by the European Union under the Horizon Europe program (grant agreement no. 101059988)

Co-funded by the European Union

UK Research and Innovation

MPA Europe project

Carbon sequestration, storage and deposition based on the environmental conditions, habitats, and species present

Develop **blue carbon scoring system** supporting management of blue carbon

Connectivity modelling (present)

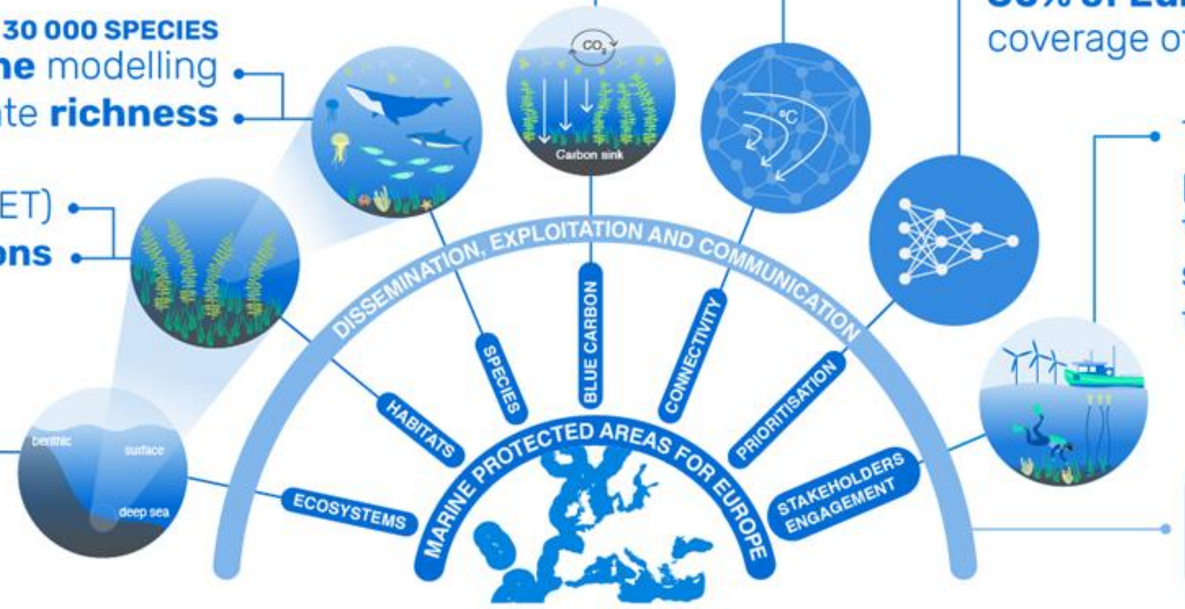
Climate velocity (recent and future)

Design **MPA networks covering 10% and 30% of European seas** that maximise coverage of biodiversity and blue carbon

30 000 SPECIES
Environmental niche modelling
Estimate **richness**

Benthic habitats (EMODNET)
Modelled **habitat distributions**

Environmental data (Copernicus)



Two way process with marine spatial planners and other interested parties to formulate **regional or national case studies**, ensuring project traceability, transparency and reproducibility

Project website, peer-reviewed scientific papers, workshops, conference, fact sheets, policy brief for stakeholders

MPA Europe project

Standardised and complete data layers

Environmental data (Copernicus)

Benthic habitats (EMODNET)
Modelled **habitat distributions**

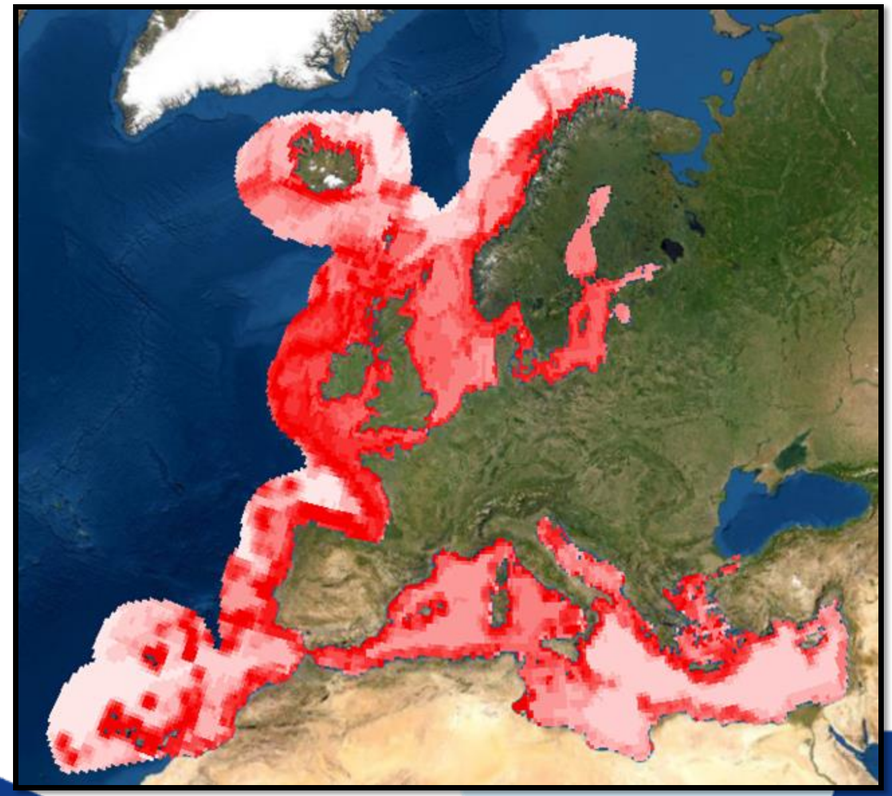
Environmental niche modelling
Estimate **richness**

Carbon sequestration, storage and deposition based on the environmental conditions, habitats, and species present

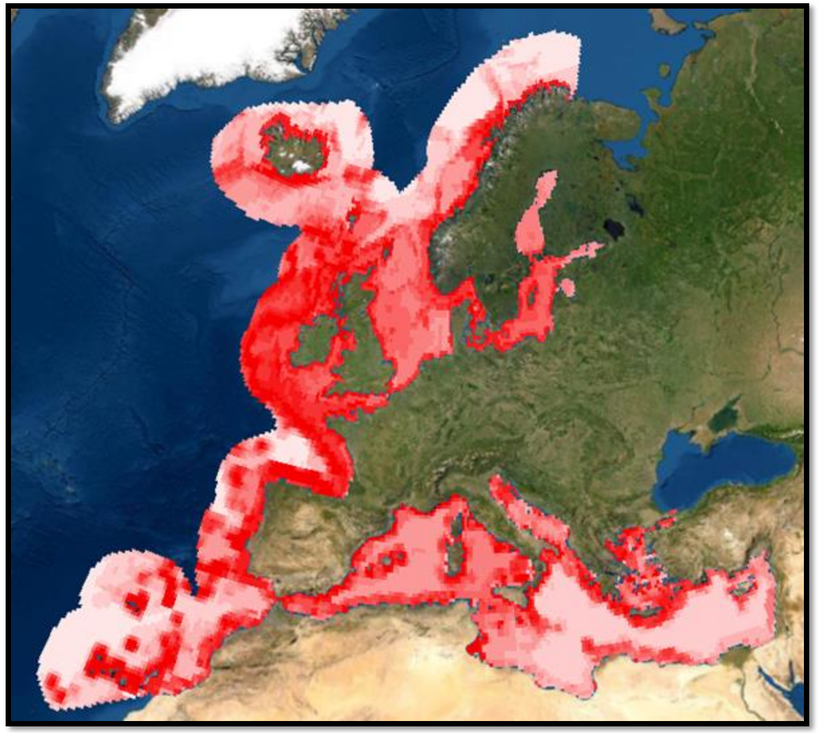
Develop **blue carbon scoring system** supporting management of blue carbon

SCP approach

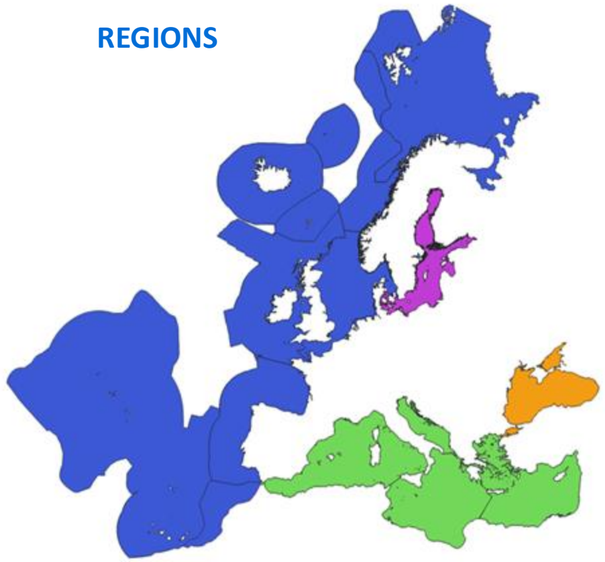
Hypothetical example
of prioritised areas
(**darker** red = **higher** priority)



MPA Europe project

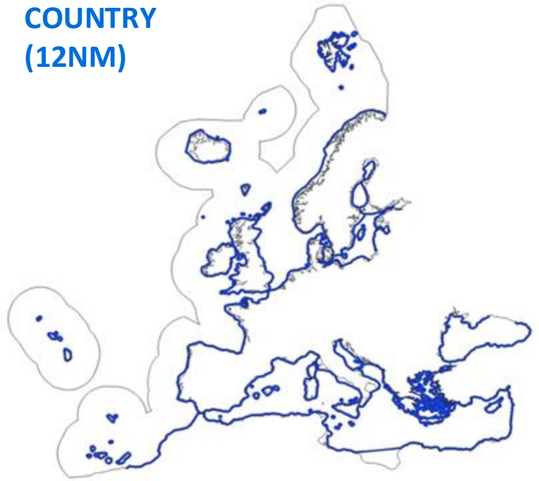


REGIONS



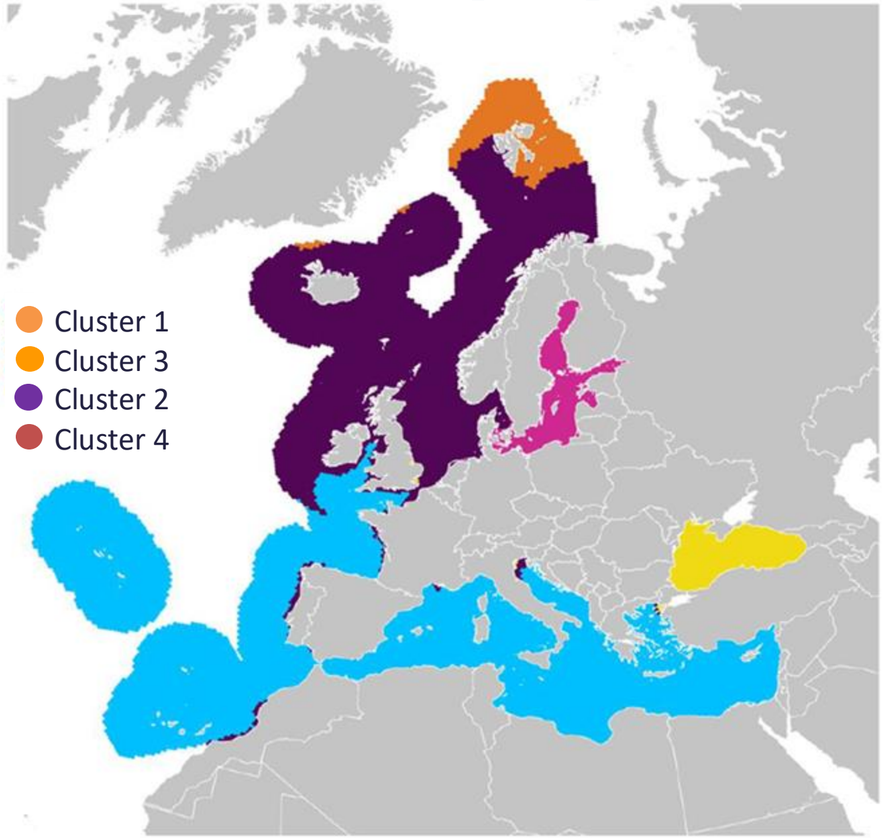
COUNTRY (EEZ)

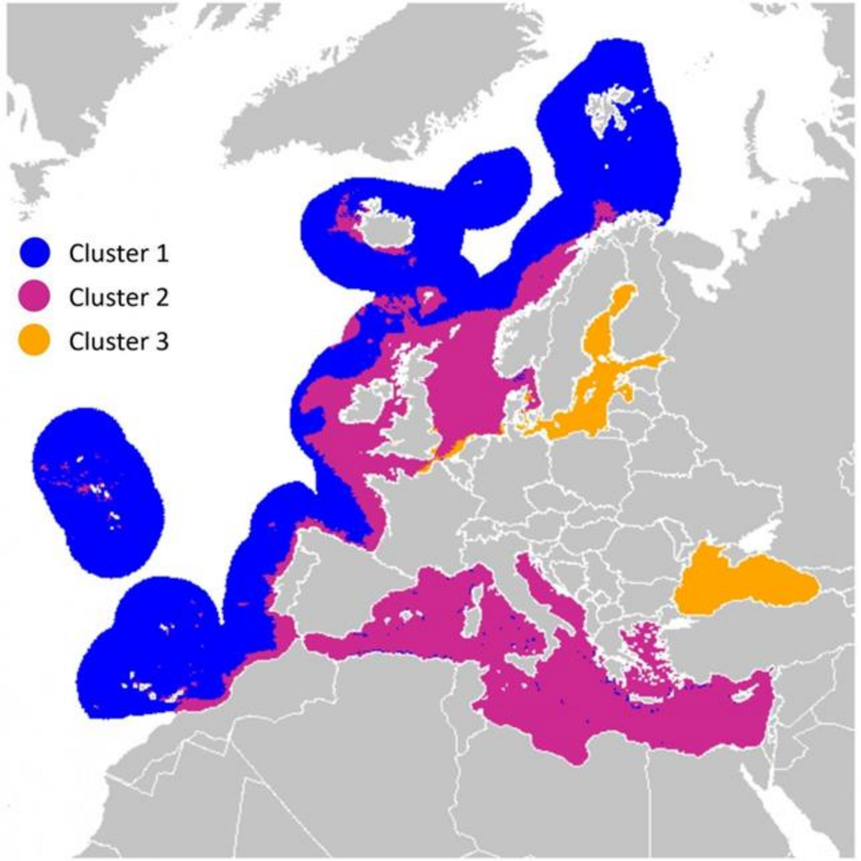
COUNTRY (12NM)



MARINE PROTECTED AREAS EUROPE

MPA Europe project





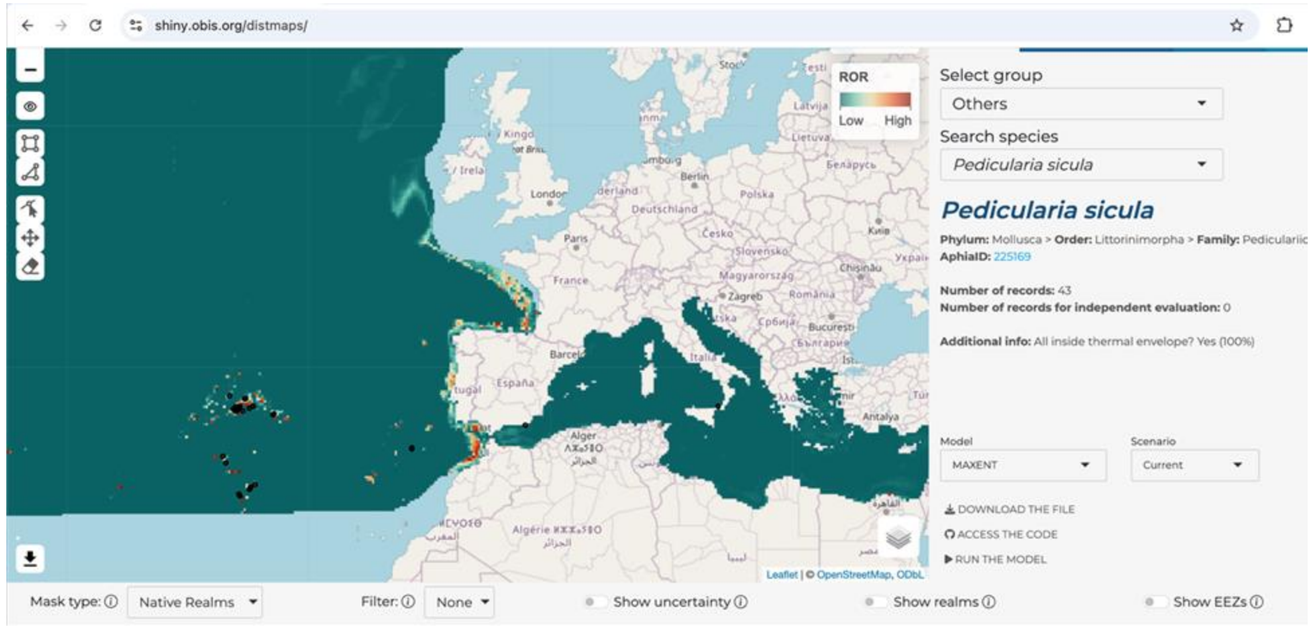
MARINE ECOSYSTEM CLASSIFICATIONS

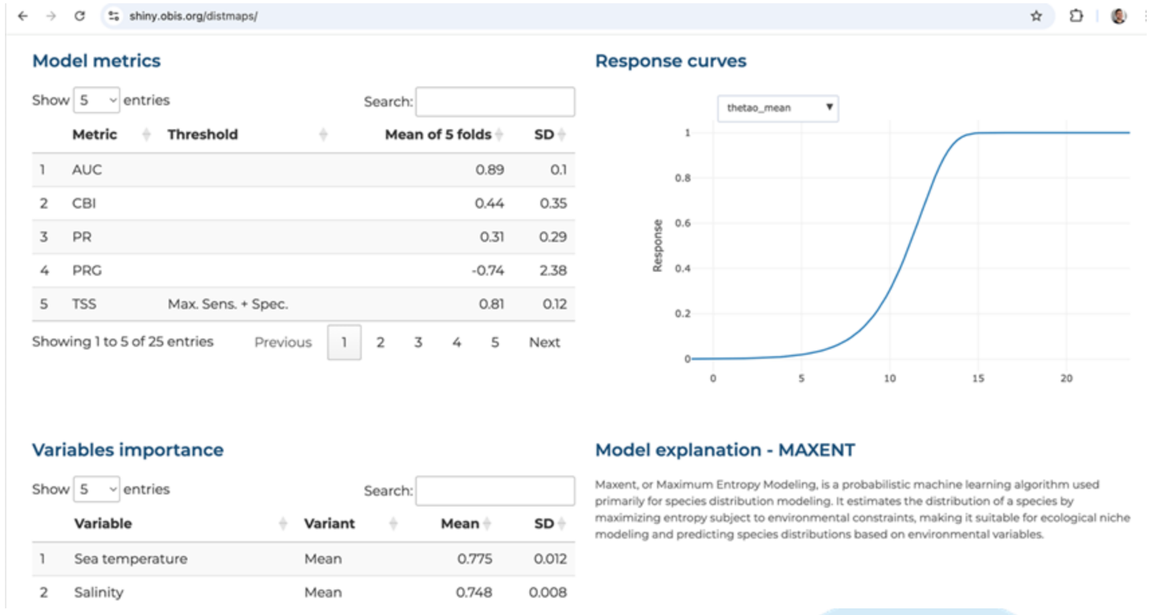
European marine ecosystems of **surface waters** (left), **near seabed** (right) and **depth-integrated** (from 0 to 2.500 m incl. seafloor, data not shown) estimated by k-means clustering analysis of environmental data

MARINE PROTECTED AREAS EUROPE

MPA Europe project

10,000 SPECIES DISTRIBUTION MODELS for all five IPCC climate change scenarios to 2050 and 2100



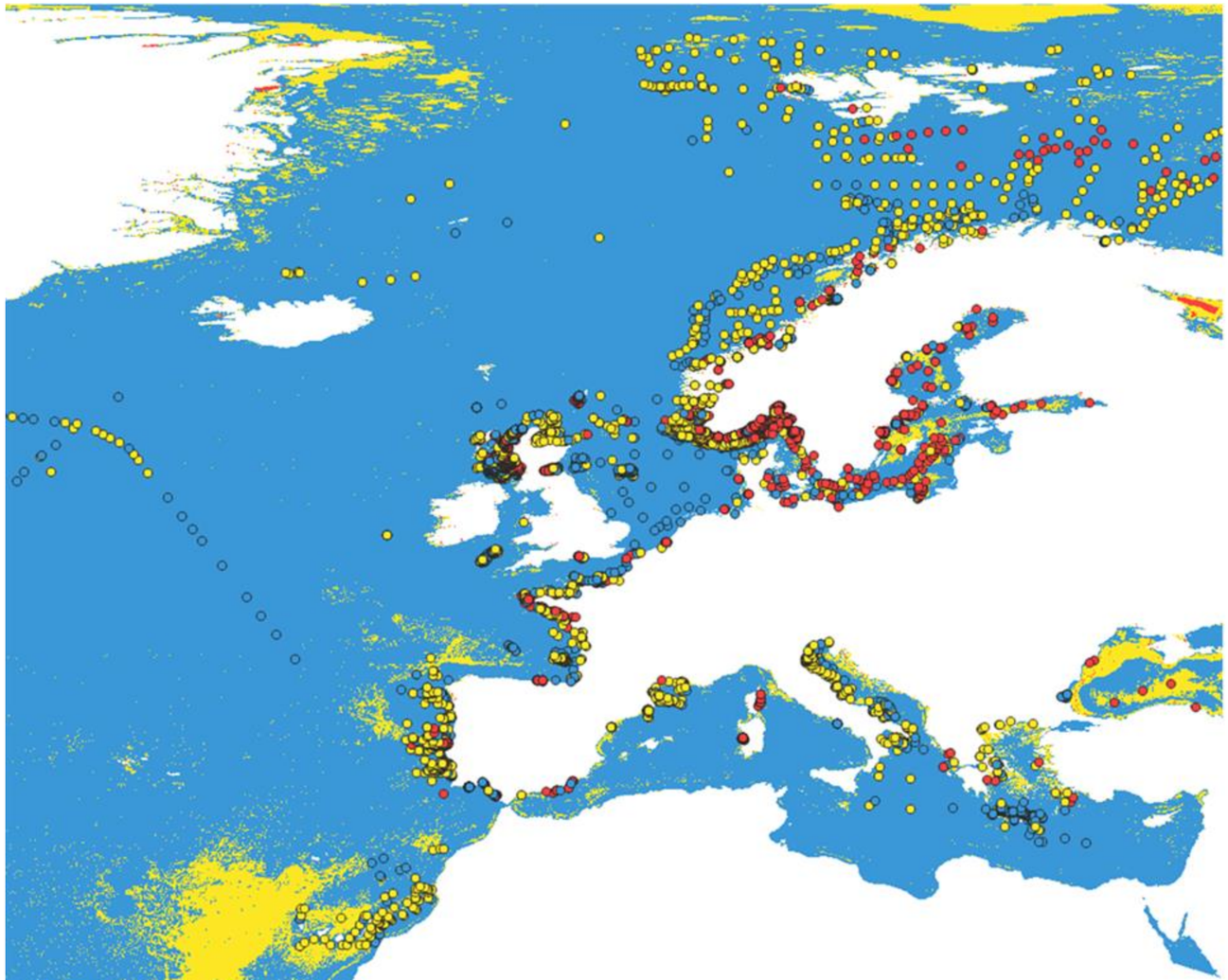


Scan me!

Principe et al. 2023abc, 2024a - MPA Europe

MARINE PROTECTED AREAS EUROPE

MPA Europe project



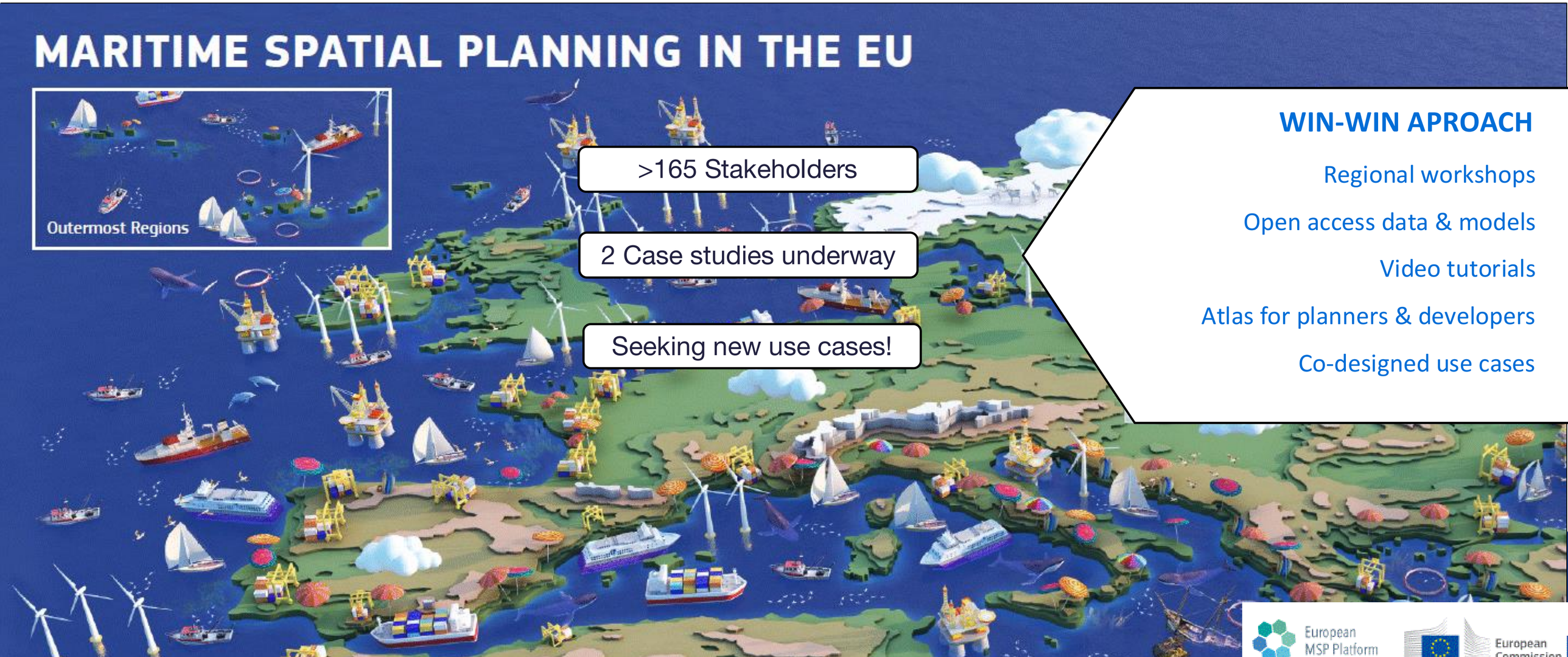
ORGANIC CARBON IN SEABED SEDIMENTS

Modelled organic carbon overlaid by sampling data points in the MPA Europe organic carbon database.

MARINE PROTECTED AREAS EUROPE

MPA Europe project

MPA Europe project

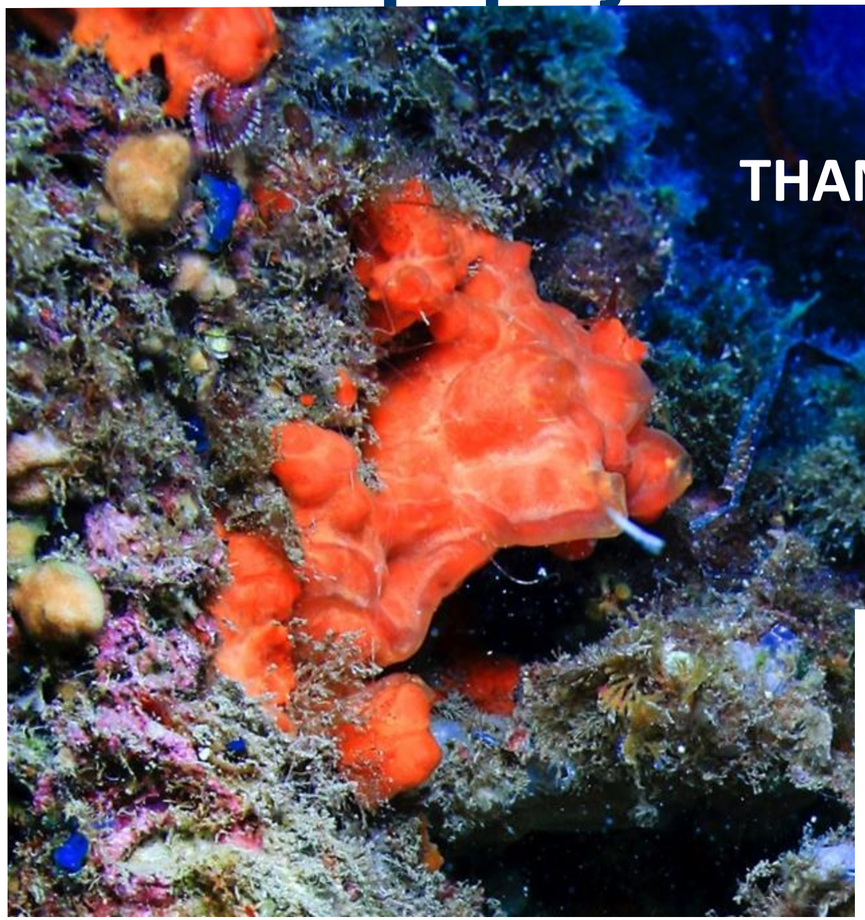


MPA Europe project

WE ARE WAITING FOR YOU IN BODØ!

MARINE PROTECTED AREAS EUROPE

MPA Europe project



THANK YOU!

BELINDA BRAMLEY – belindabramley@gmail.com
CLIMAZUL

https://mpa-europe.eu/

@mpaeuropeproject

mpa-europe-project

@Europe_MPA

MARINE PROTECTED AREAS EUROPE

Points of overlap and complementarity

Open Panel Discussion

Tools | Stakeholder Engagement | Demo Sites

- Julian Burgos, BioProtect project, Marine and Freshwater Research Institute
- Inne Withouck, MSP4BIO project, Flanders Marine Institute
- Franziska Drews-von Ruckteschell, Blue4All project, SUBMARINER
- Luca van Duren, BLUE CONNECT project, Deltares
- Belinda Bramley, MPA Europe project, Blue Economy Consultant

Opportunities of cooperation

Open Panel Discussion

Data Sharing | Knowledge transfer | Think Tanks | MPA community

- Julian Burgos, BioProtect project, Marine and Freshwater Research Institute
- Inne Withouck, MSP4BIO project, Flanders Marine Institute
- Franziska Drews-von Ruckteschell, Blue4All project, SUBMARINER
- Luca van Duren, BLUE CONNECT project, Deltares
- Belinda Bramley, MPA Europe project, Blue Economy Consultant

CONCLUSION

What are the most relevant actions to be taken for marine protection and restoration of European seas?

Any final thoughts?

EU MISSIONS
RESTORE OUR OCEAN & WATERS

BLUE MISSION BANOS

3rd MISSION ARENA

26-27 November 2024 | Amsterdam

THANK YOU

Further questions?

Mariana Mata Lara

mml@submariner-network.eu

BLUE CONNECT · MSP4BIO · Blue4all · BioProtect · MPA MARINE PROTECTED AREAS EUROPE

in #MissionArena3

MPA Managers & Local Communities

Funded by the European Union