



EUROPEAN UNION



EU MISSIONS

RESTORE OUR OCEAN & WATERS

Conference on Microplastics in drinking water

Budapest, 3 October 2024

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European Commission, DG MARE

#EUmissions #HorizonEU #MissionOcean





EU Missions

*A new way to bring **concrete solutions** to some of our **greatest challenges**.*

- **Our Mission?** The restoration of our ocean and waters!
- **Why a Mission?** It tackles the problem on a European scale.
- **What it delivers?** Impact through:
 - ❖ New role for R&I
 - ❖ Portfolio of actions
 - ❖ New forms of governance & collaboration
 - ❖ Citizens' participation



Mission objectives and targets

Restore our Ocean and Waters by 2030

Objective 1
Objective 2
Objective 3

PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY

- Protect at least 30% and strictly protect 10% EU's sea areas
- Restore 25.000 km free flowing rivers
- Marine nature restoration targets (incl. degraded seabeds, coastal ecosystems)

PREVENT AND ELIMINATE POLLUTION OF OUR OCEANS, SEAS AND WATERS

- Reduce by at least 50% plastic litter
- Reduce by at least 30% microplastics
- Reduce by at least 50% nutrient losses, chemical pesticides

MAKE THE BLUE ECONOMY CARBON- NEUTRAL AND CIRCULAR

- Net zero maritime emissions
- Zero carbon aquaculture,
- Low carbon multipurpose use of marine space

ENABLERS

**Digital Ocean and Waters Knowledge
system**

Public mobilization and engagement



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



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

<https://www.youtube.com/watch?v=poZ7Dz4Xvl8>



MISSION LIGHTHOUSES

Mission lighthouses are sites to test, demonstrate, and deploy the Mission activities across EU seas and river basins.

They try out new ideas and involve local businesses and people in the process.



EU MISSIONS

RESTORE OUR OCEAN & WATERS



ATLANTIC - ARCTIC



BALTIC & NORTH SEA



DANUBE-BLACK SEA



MEDITERRANEAN





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EU MISSIONS

RESTORE OUR OCEAN & WATERS



Mission work programmes 2021-2022-2023-2024-2025:

2021 EUR 117 million EU funding 20 projects ongoing

2022 EUR 118 million EU funding 20 projects ongoing

2023 EUR 130 million EU funding 26 projects ongoing
(+1 in preparation)

2024 EUR 110 million EU funding evaluations ongoing

2025 ± EUR 118 million EU funding work programme in
preparation

Mission Objective 2 topics and projects

2021

Actions to prevent, minimise and remediate **litter and plastic pollution**, IA – 16M€

SeaClear2.0 - Scalable Full-cycle Marine Litter Remediation in the Mediterranean: Robotic and Participatory Solutions

REMEDIES - Co-creating strong uptake of REMEDIES for the future of our oceans through deploying plastic litter valorisation and prevention pathways

2022

Marine litter and pollution – Smart and low environmental impact fishing gears, IA - 10M€

SEARCULAR - Circular solutions for fishing gears

NETTAGPlus - Preventing, avoiding and mitigating environmental impacts of fishing gears and associated marine litter

Prevent and eliminate **litter, plastics and microplastics**: Innovative solutions for **waste-free European rivers**, IA – 10M€

UPSTREAM - Circular and Bio-Based Solutions for the Ultimate Prevention of Plastics in Rivers Integrated with Elimination And Monitoring Technologies

INSPIRE - Innovative Solutions for Plastic Free European Rivers

Actions to prevent, minimise and remediate **chemical pollution**, IA - 17M€

RHE-MEDiation - Responsive hub for long term governance to destress the Mediterranean Sea from chemical pollution

iMERMAID - Innovative solutions for Mediterranean Ecosystem Remediation via Monitoring and decontamination from Chemical Pollution

2023

Missions Ocean & Soil – Joint demonstration of approaches and solutions to address **nutrient pollution in the landscape-river-sea system** in the Mediterranean sea basin, IA - 8M€

Path4Med - Demonstrating innovative pathways addressing water and soil pollution in the Mediterranean Agro-Hydro-System

SEACURE - Innovative solutions to prevent, reduce and remediate nutrient pollution along the land-river-sea system in the Mediterranean basin

Circular and Bio-Based Solutions for the Ultimate Prevention of Plastics in Rivers Integrated with Elimination And Monitoring Technologies



Project details

Call: **HORIZON-MISS-2022-OCEAN-01-04** | Project Number: **101112877**

Start date: **1 September 2023** | End date: **31 August 2027** | Duration: **4 years**

EU contribution: **€ 7 024 032,90** | UK contribution: **€ 2 959 042,00**



Consortium

22 partners | **11 countries**

10 research institutes | **10 industrial partners** | **2 associations**

Project coordinator: **Aitiip Technology Centre (Spain)**



"Co-Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them."

Objectives

The problem of litter (L), plastics (P), and microplastics (MP) in the European river systems needs to be addressed at several points in the water supply systems:

- ✓ **before wastewater treatment plants (WWTPs)**
- ✓ **after wastewater treatment plants (WWTPs)**
- ✓ **in the rivers themselves**

The overall objective of UPSTREAM is thus to address pollution **at every point in the path** of L, P, and MP, from creation until ending up in the seas, while engaging stakeholders at all levels – industry, government, and citizens.

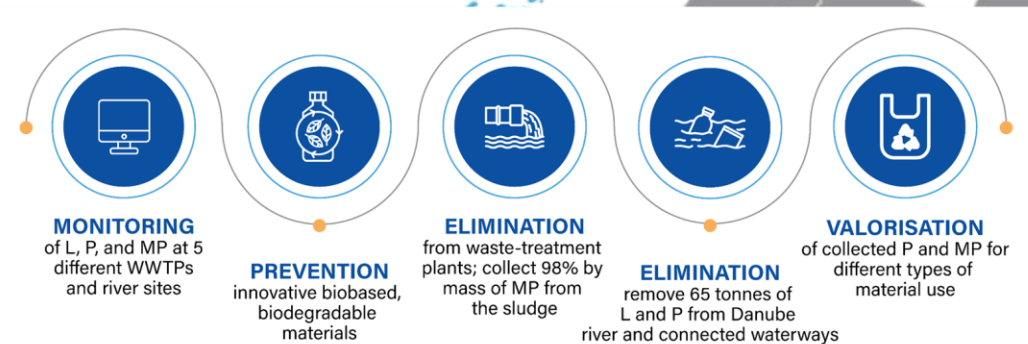
Ambitions

- improve the **cleanliness** and **water quality** of the **7 European rivers** that flow through several major European capitals and flow into 5 sea basins (Celtic, Mediterranean, Black and North Seas);
- the UPSTREAM project is based on the widespread deployment and demonstration of a suite of 15 advanced solutions that address the serious issues of pollution from litter (L), plastics (P), and microplastics (MP) in European rivers.

5 Demonstration sites and 7 rivers

- | | | | | |
|--|------------------------------|---|----------------------------------|---|
| 1 | 2 | 3 | 4 | 5 |
| WWTP United Kingdom
(Severn and Trent rivers) | WWTP Spain
(Ebro river) | WWTP Italy
(Ticino and Olona rivers) | WWTP Germany
(Queich river) | Testing on river Serbia
(Danube river) |

5 Pillars:



Expected outcomes:

- ✓ Reduced pollution from litter, plastics and microplastics in European rivers.
- ✓ Accelerated uptake of innovative solutions to prevent and minimize pollution of rivers by L, P, and MP.
- ✓ Effective monitoring of litter, plastics and MP in freshwaters to implement the Water Framework Directive and Marine Strategy Framework Directive.
- ✓ Reduction by at least 50% plastic litter at sea and by at least 30% MP released into the environment.
- ✓ Contribution to the Mission's Digital Ocean and Water Knowledge system through marine observations and open data and knowledge sharing.



INSPIRE

Innovative Solutions for Plastic Free European Rivers

Mission Europe INSPIRE project

Innovative Solutions for Plastic Free European Rivers (2023-2027)

Gert Everaert

www.inspire-europe.org / [Inspire Europe \(LinkedIn\)](#) / [Inspire Europe \(Facebook\)](#) / [inspire_eu \(Instagram\)](#) / [INSPIRE_EUROPE \(twitter\)](#)



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European Union

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INSPIRE will contribute to the drastic reduction of litter, including macro and microplastics, in European rivers, with a holistic approach conceptualized in the “DCP concept”:

DETECTION of the pollution present

Camera



Drones



Apps



In situ



COLLECTION of litter

Screws and nets



Floating booms



Floating booms



Floating booms



Citizen
engagement



Rotation wheels



PREVENTION of litter

Collecting it from its waste stream

Filters

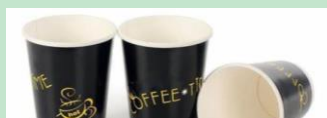


Reactor
s

Developing alternatives



Mulch films and
greenhouse films



Coating of paper cups
and dishes



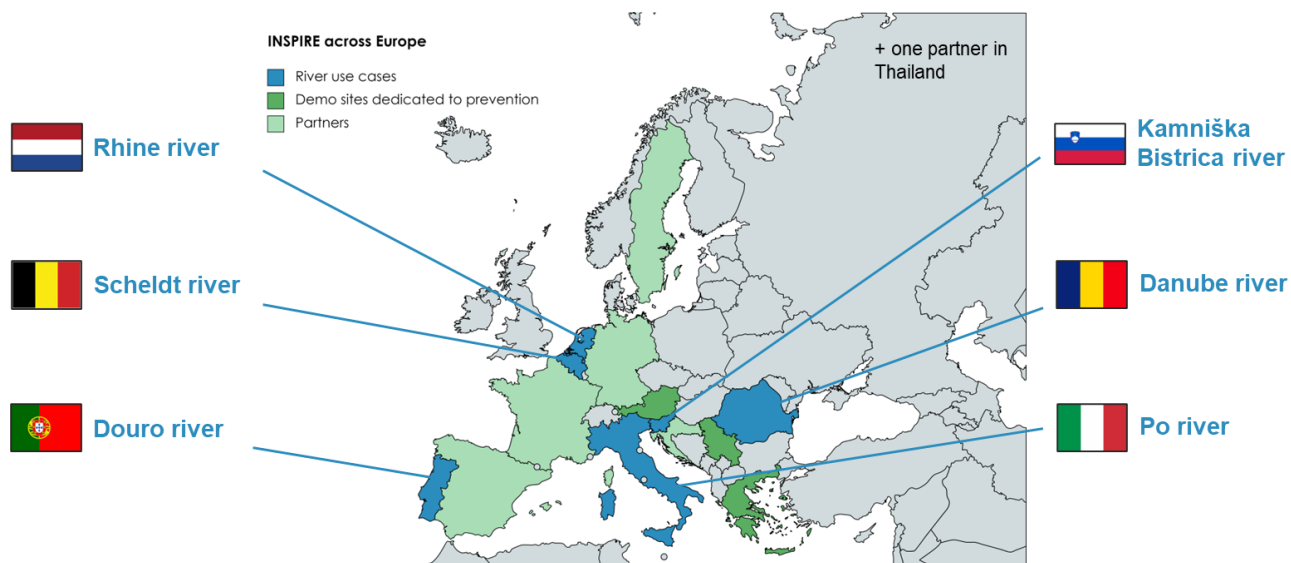
Coatings for food
preservation



Cosmetic
formulations



Zero-waste supply
chain



Developing of a modular **Master Plan (MaP)** for scaling up the solutions and offer ‘fit for all’ solutions applicable and replicable in all rivers in Europe.



Portfolio analysis – Breakdown of scope and projects



Objectives/Enablers	Breakdown objectives/enablers for the analysis	No projects analysed	No projects relevant
Objective 1: Protect and restore marine and freshwater ecosystems and biodiversity	Obj. 1a: Marine and coastal ecosystems and biodiversity	300	151
	Obj. 1b: Freshwater ecosystems and biodiversity	300	86
Objective 2: Prevent and eliminate pollution of our ocean, seas and waters	Obj. 2a: Marine litter and microplastics	300	154
	Obj. 2b: Nutrients, chemical pesticides and other pollutants	300	200
Objective 3: Make the sustainable blue economy carbon-neutral and circular	Obj. 3a: Multiuse of water space (Maritime Spatial Planning (MSP), multi-use platforms)	102	46
	Obj. 3b: Low-impact fisheries and aquaculture	165	62
	Obj. 3c: Decarbonisation and ecosystem perspectives in maritime industries	184	111
Enabler 1: Digital ocean and water knowledge system.	Ena. 1. Development of the EU Digital Twin of the Ocean	402	187
Enabler 2: Public mobilisation and engagement	Ena. 2a: Mobilisation of citizens and young generations	153	96
	Ena 2b: Raising awareness	150	77
Total with duplicates		2356	1170
Total		1430	841



Mission Ocean Actions

Title of the action	Name of organisation	Keyword
		microplastic

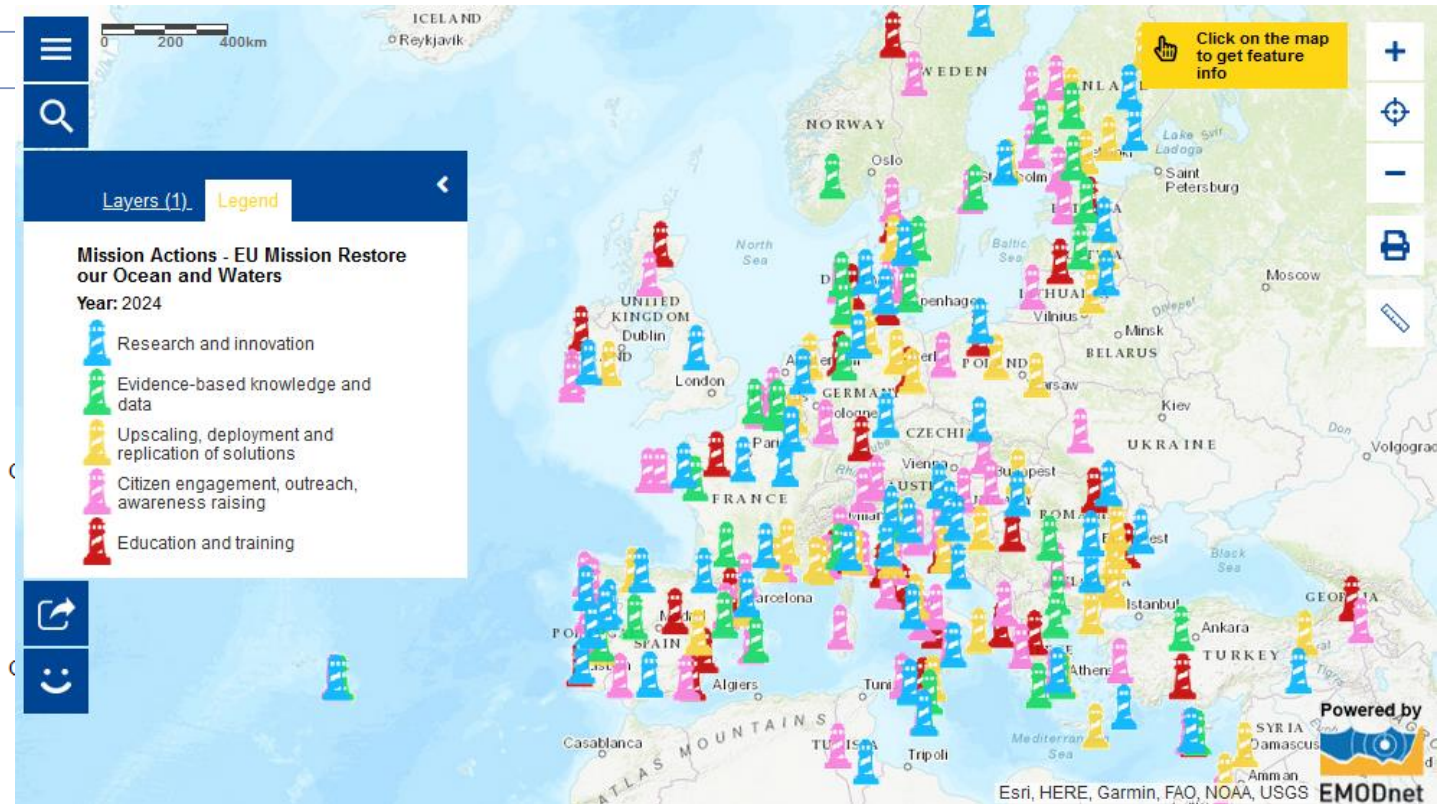
Basin coverage	Type of action proposed	Country
- Any -	- Any -	- Any -

Sort by	Order
Start date	Desc

Apply filters

Reset

Name of organisation	End date of the action	Title of the action	List of Partners	Type of action proposed	Country
Mold S.r.l.	31/12/26	Empowering rivers, empowering people	SOS-ZEROPOL2030 Project Partners: Flanders Marine Institute (VLIZ), Wageningen University (WU), University of Vienna (Univie), SINTEF Ocean(SO), Stichting Wageningen Research (WR), Black Sea NGO Network (BSNN), Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE), GRID-Arendal, Institute for Advanced Sustainability Studies (IASS)	Upscaling, deployment and replication of solutions	
MaREI Centre, ERI, University College Cork, Ireland	31/08/26	SOS-ZEROPOL2030 (Horizon Europe funded)		Citizen engagement, citizens-science, youth-led initiatives, communities of practice, ocean and water literacy, outreach, awareness raising and participatory approaches	
Hellenic Centre for Marine Research	31/07/23	Schools Against Plastics	BeMed-A commitment for the plastic free Mediterranean Sea	Citizen engagement, citizens-science, youth-led initiatives, communities of practice, ocean and water literacy, outreach, awareness raising and	Mediterranean Sea 14800





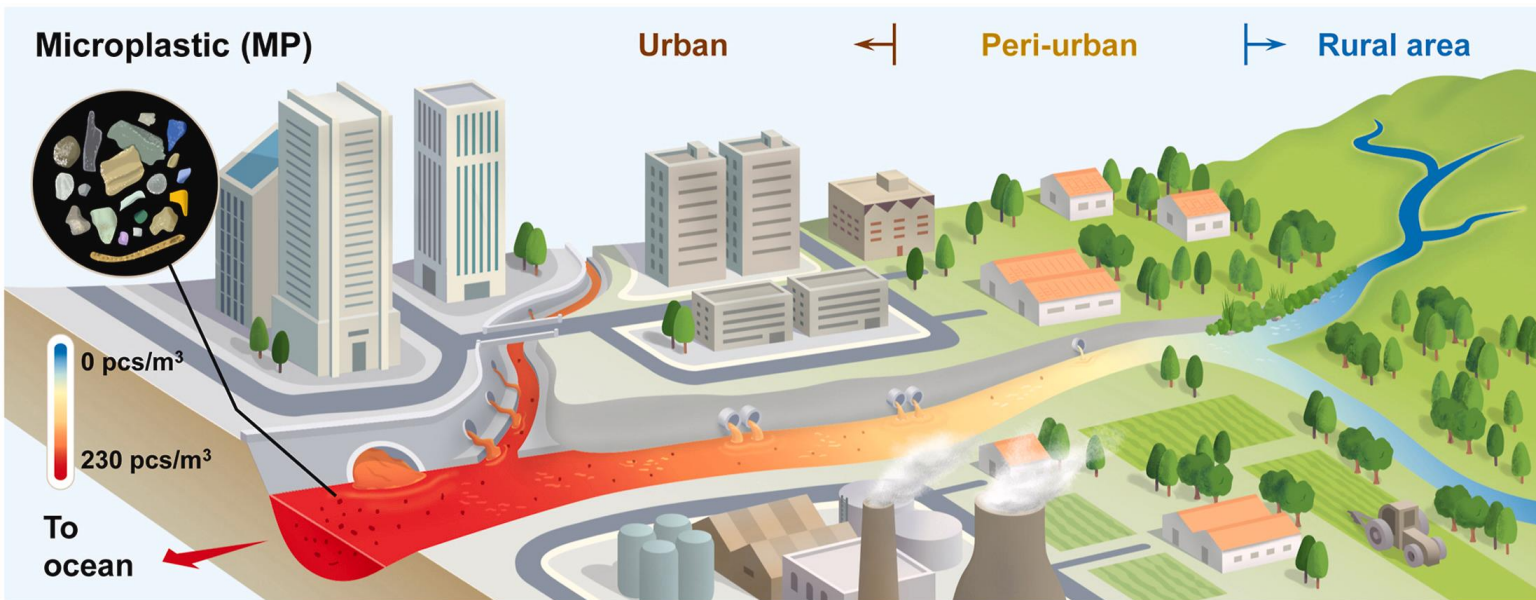
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ISSN 1831-9424



JRC TECHNICAL REPORT

Thinking of the future



From A. Kunz et al., Environmental Pollution, Volume 321, 15 March 2023, 121096

Guidance on the Monitoring of Marine Litter in European Seas

An update to improve the harmonised monitoring of marine litter under the Marine Strategy Framework Directive

MSFD Technical Group on Marine Litter
2023



Joint
Research
Centre

EUR 31539 EN



EUROPEAN UNION MISSION IMPLEMENTATION PORTAL

Mission Ocean and Waters service portal

[Home](#)[Mission Charter](#)[Mission Solutions](#)[Mission funding](#)[Collaboration space](#)[Advisory services](#)[EU Blue Parks](#)[Mission Lighthouses](#)[News & Events](#)[About](#)

Mission Ocean and Waters service portal

One-stop-shop for stakeholders involved and interested in the Mission Ocean implementation.

Mission Ocean projects

These Horizon Europe Mission Ocean-funded projects are part of the drivers to fulfil the Mission goals across all Lighthouses. Discover who they are and the work they do.

EU Mission: Restore our Oceans and Waters

Discover what this Mission is, how it works, how it was chosen, and more.

[Visit page >](#)

Find financing

Find a variety of financial programmes and instruments to finance projects and actions related to ocean conservation and blue economy.

Join the Mission

We provide different opportunities for actors and citizens to support and implement ideas related to ocean and water ecosystem restoration, the prevention and elimination of pollution, and making the sustainable blue economy circular and carbon-neutral.



Endorse the Mission Charter

We are calling on Member States, regions and a wide range of stakeholders to endorse the Mission Charter and pledge actions that will contribute to the successful implementation of Mission Ocean and Waters and its Lighthouses.



Join our Forum

Mission Ocean and Waters will present its progress at a Forum hosted annually in Brussels, allowing online exchanges and networking among the Mission Forum community. Find out more about the event here.



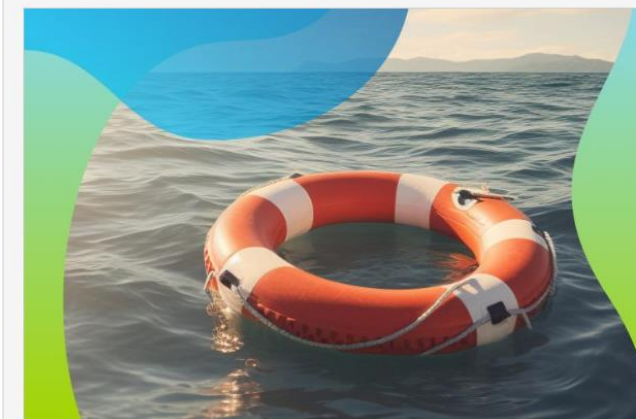
Join the EU Blue Parks Community

Join the EU Blue Parks Community, a collaborative platform for policymakers, researchers, and stakeholders to work together on marine conservation and achieve the goals of the 2030 EU Biodiversity Strategy.



Search for innovative solutions

Find shared knowledge and expertise, fostering collaboration and innovation.



Seek assistance in tailoring your research

Request support in customising your research and connect with solution owners. You can also submit your demand through our helpdesk webform.