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EU MISSIONS

RESTORE OUR OCEAN & WATERS

Concrete solutions for our greatest challenges

John Hanus
B.4 Healthy Ocean and Waters
DG Research and Innovation
European Commission

#EUmissions #HorizonEU #MissionOcean



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Horizon Europe R&I Missions

Linking EU's research and innovation to major societal needs;
with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines **5 missions areas**:

Adaptation to
Climate Change



Cancer



Climate-neutral
and Smart Cities



Restore our
Ocean and Waters



Soil Deal
for Europe



Mission EU policy priority

“Every problem is an opportunity for innovation. But we need a clear and ambitious objective. We need a mission, like the European Green Deal.

*That is why we have launched the ‘Mission to Restore our Ocean and Waters by 2030’. With **EUR 0.5 billion in funding** from the world's largest research and development programme, Horizon Europe, and other instruments.”*

EC President Ursula von der Leyen, 11 Feb 2022
https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_22_962





Mission objectives and targets

Restore our Ocean and Waters by 2030

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 mobilisation and engagement



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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



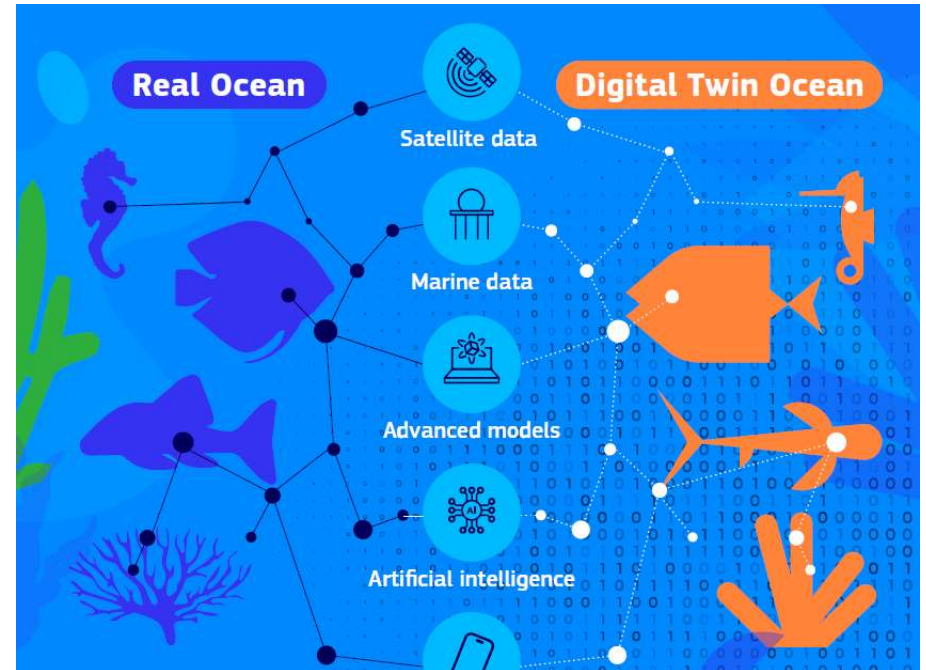
PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY

Atlantic & Arctic coast





Enabler 1: Digital Ocean and Waters Knowledge System



Enabler 2: Public Mobilisation



Co-creation and co-design

- Co-design of Mission
- Citizen Assemblies

Citizen Science

- ERA Plastic Pirates
- OTTERS CSA

Education, Literacy & Awareness

- EU4Ocean coalition
- Youth engagement
- Student and school initiatives (Blue Schools)
- Choose your fish campaign

Stewardship and volunteering

- Community-driven business models





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Be part of the Mission: adhere to the Charter



[Restore our Ocean and Waters \(europa.eu\)](https://europa.eu)

Mission Charter

We are calling on Member States, regions and a wide range of stakeholders to endorse the [Charter](#) (EN | ***) and pledge actions that will contribute to the successful implementation of the Mission and its lighthouses.

Please click below to endorse the Charter and pledge actions

[Endorse the Charter](#)



Action pledges submitted so far: [interactive map](#) (EN | ***)

More information

- [mission-oriented policy for Horizon Europe](#) (EN | ***)
- [Horizon Europe](#) (EN | ***)
- [co-design session on oceans mission at Research and Innovation Days \(video\)](#)
- [EU Missions info days 2022](#) (EN | ***)

Contact

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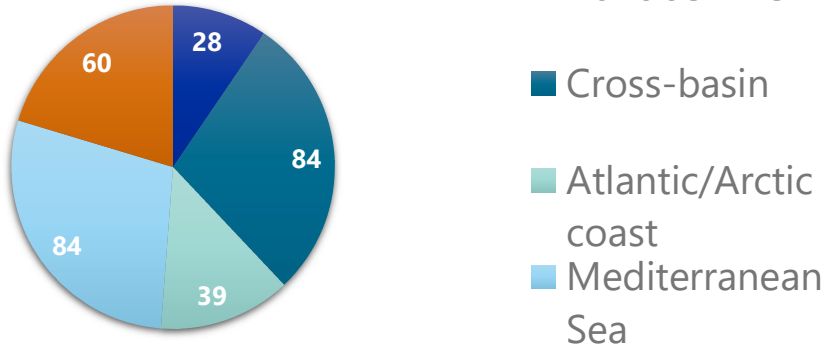
Adhere to the Charter by filling-in the form on [EUSurvey - Survey \(europa.eu\)](#)



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Mission Charter actions

Basin coverage

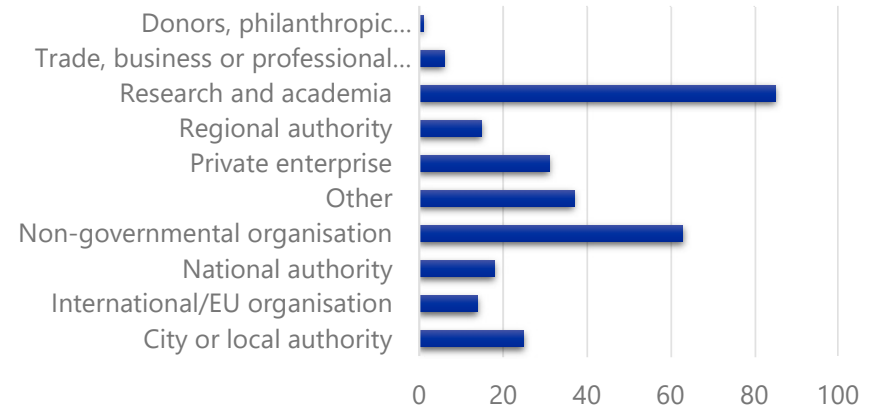


Type of action



Over 400 actions submitted with almost 300 actions visible to the Mission Atlas
Budget: €3.2 billion

Type of organisation





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HORIZON EUROPE

Work
Programmes,
Calls,
Projects

EU
MISSIONS



**Mission Ocean and Waters:
ca 350 M€ for R&I projects in 2021-2023**



HE: Mission Ocean Work Programmes & Calls

2021

CALL - EUR 114 million for calls for proposals
Projects portfolio selected
EUR 117m EUR funding

2022

CALL - EUR 117.9

2023

CALL for proposals open (17 Jan 2023, DL 20 Sept 2023)



WP 2023 - Mission Ocean, seas and waters

adopted on 6 December 2022: main features

- ✓ Follows the **impact-driven logic** of Horizon Europe and European Missions
- ✓ Supports major **EU policy objectives**: EU Biodiversity Strategy 2030, EU Action Plan toward Zero pollution, the Communication on a Sustainable Blue Economy, The Nature restoration Law
- ✓ Special focus on «**lighthouses**»: hubs for the development and deployment of transformative innovations (technological, social, business, governance) in **4 basins**:
 - **Atlantic and Arctic sea basin**
 - **Baltic and North Sea basin**
 - **Mediterranean sea basin**
 - **Danube river basin**
- ✓ Based on the **Mission Implementation Plan, 2023 WP complements WP 2021 and 2022 with further actions and new research & innovation areas**
- ✓ Supports the Mission first phase: «**development and piloting**» for 2021-2025



WP 2023 - Mission Ocean, seas and waters

adopted on 6 December 2022: main features

- ✓ **2023 calls** addressing 3 policy objectives as well the enabling activities:
 - **Protect and restore marine and freshwater ecosystems and biodiversity**
 - **Prevent and eliminate pollution of our oceans, seas and waters**
 - **Sustainable, carbon-neutral and circular Blue economy**
 - **Enabling activities: digital ocean & water knowledge system (DTO) and public mobilisation and engagement**
- ✓ **Other actions:** common to all Mission (Mission Boards; solidarity corps)
- ✓ **Indicative budget 2023:** EUR 87.7 million + EUR 31 million for joint calls
- ✓ **Call opening:** 17 January December 2022
- ✓ **Call closing date:** 20 September 2023

Info Day: <https://research-innovation-community.ec.europa.eu/events/1nVczf9ihgPdOg3zyoLyuC/programme>

Objective 1



Danube lighthouse Portfolio of projects

2021

Restoration of fresh & transitional waters ecosystems
IA - 17M€

DANUBE4all - Restoration of the Danube river basin waters for ecosystems and people from mountains to coast

DALIA - Danube Region Water Lighthouse Action

Lighthouse CSA - 3M€

EcoDaLLi - ECOsystem-based governance with DANube lighthouse Living Lab for sustainable Innovation processes

2022

Protection & restoration of wetlands, flood plains, coastal wetlands & salt marshes and their biodiversity
IA - 17M€

DaWetRest* - Danube Wetlands and flood plains Restoration through systemic, community engaged and sustainable innovative actions

Restore4Life* - Restoration of wetland complexes as life supporting systems in the Danube Basin

* WP2022 projects are at the grant preparation stage

2023

Demonstration of effective and sustainable management of sediments
IA - 17M€

Call deadline for WP2023 topics: 20/09/2023

Objective 1



Atlantic and Arctic lighthouse

Portfolio of projects

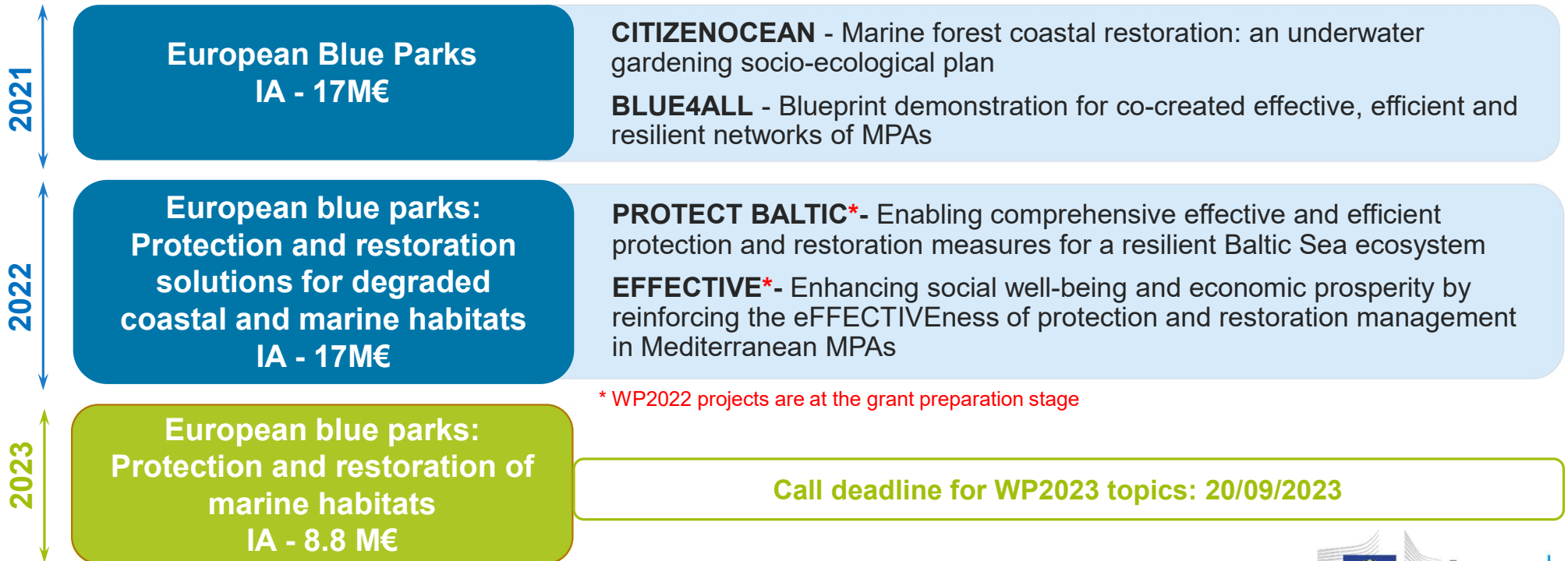


Objective 1



European Blue Parks

Portfolio of projects



CITIZENOCEAN - Marine forest coastal restoration: an underwater gardening socio-ecological plan
BLUE4ALL - Blueprint demonstration for co-created effective, efficient and resilient networks of MPAs

PROTECT BALTIC* - Enabling comprehensive effective and efficient protection and restoration measures for a resilient Baltic Sea ecosystem
EFFECTIVE* - Enhancing social well-being and economic prosperity by reinforcing the eFFECTIVENess of protection and restoration management in Mediterranean MPAs

* WP2022 projects are at the grant preparation stage

Call deadline for WP2023 topics: 20/09/2023

Objective 2



Mediterranean lighthouse

Portfolio of 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

Lighthouse CSA - 3M€

BlueMissionMed - Lighthouse coordinating and supporting the innovation ecosystem for a Healthy Pollution free Mediterranean Sea

2022

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

* WP2022 projects are at the grant preparation stage

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€

Call deadline for WP2023 topics: 20/09/2023

Objective 3

Baltic and North Sea lighthouse Portfolio of projects



2021
2022
2023

Low impact marine aquaculture and multi-purpose use of marine space, IA – 16M€

ULTFARMS - circular Low Trophic offshore Aquaculture in wind farms and Restoration of Marine Space
OLAMUR - Offshore Low-trophic Aquaculture in Multi-Use Scenario Realisation

Lighthouse CSA - 3M€

BlueMissionBANOS - Supporting the Mission Ocean Lighthouse in the Baltic and North Sea basins

Bringing sustainable algae-based products and solutions to the market IA - 17M€

LOCALITY* – Nature-positive algae-based food, agriculture, aquaculture and textile products made in North and Baltic Sea ecosystems
AlgaePro BANOS* - Accelerating algae product developments in Baltic and North Sea

* WP2022 projects are at the grant preparation stage

Green, energy-efficient and sustainable small-scale fishing fleets IA- 12M€

Call deadline for WP2023 topics: 20/09/2023

Cross-basin topics

Objective 1

2023 European natural lakes: demonstration of integrated approaches to protection and restoration of natural lake ecosystems and their biodiversity, IA - 12M€

Mission Climate adaptation, Mission Ocean and Mission Soil – Joint demonstration of an integrated approach to increasing landscape water retention capacity at regional scale, IA - 5M

Objective 2

2022 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

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

* WP2022 projects are at the grant preparation stage

Objective 3

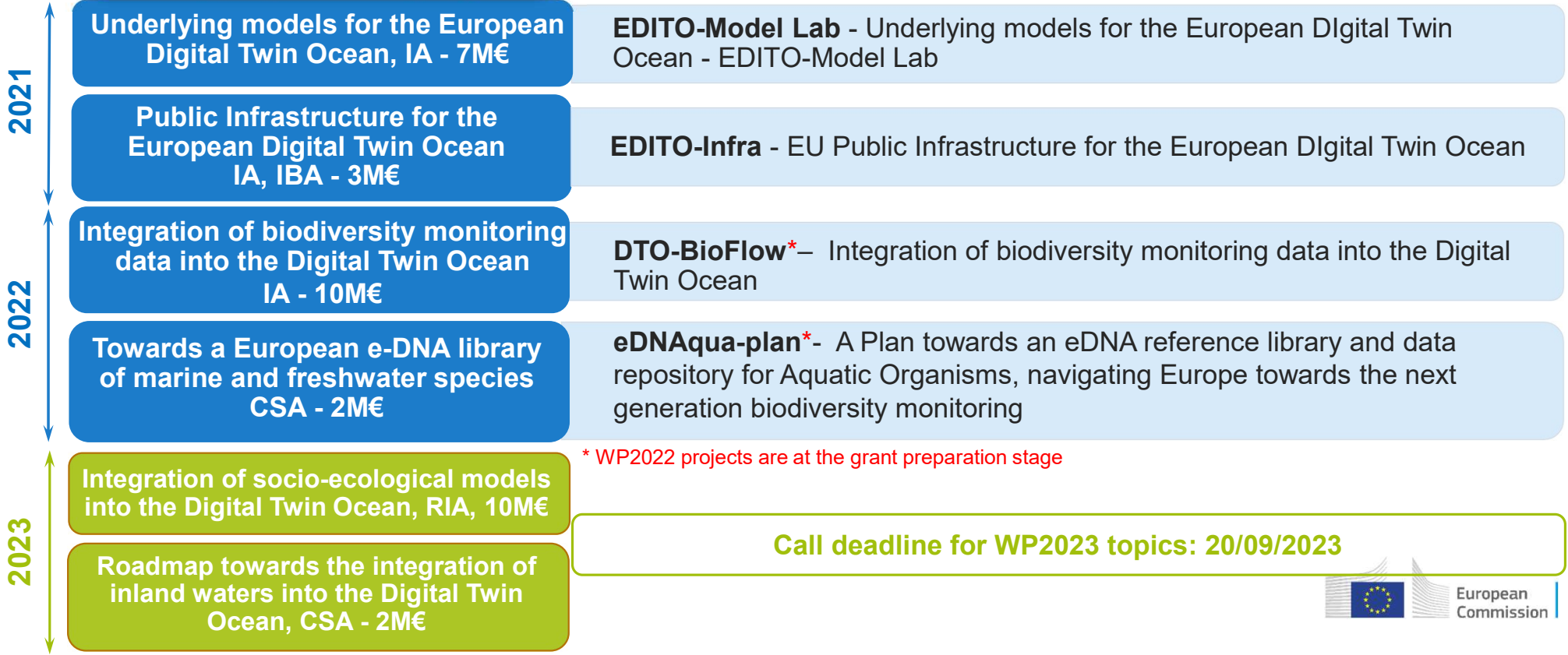
2023 Nature-inclusive concept design and practices for offshore renewables, RIA – 4.5 M€

Analysis of the obstacles and opportunities for repurposing aged/unused offshore infrastructures, RIA – 1.4 M€

Call deadline for WP2023 topics: 20/09/2023



Enabler 1 - Digital Ocean and Waters Knowledge system



Enabler 2 - Public mobilisation and engagement



The relation of young generations with the sea and water: values, expectations, and engagement
RIA - 1M€

FLOW - Future Lives with Oceans and Waters

Piloting citizen science in marine and freshwater domains, CSA - 1M€

OTTERS - Social Transformation for Water Stewardship through Scaling Up Citizen Science

Europeanisation of Plastic Pirates Citizen Science Initiative, IBA - 2M€

PlasticPiratesEU

Student and school activities for the promotion of education on 'blue' sustainability and the protection of marine and freshwater ecosystems, CSA - 3M€

SHORE* - SHORE: EmpOweR Students as the agents of cHangE
ProBleu* - Promoting ocean and water literacy in school communities

Towards local community-driven business models: regenerative ocean farming, CSA - 3M€

C-FAARER* - Community-driven Farming for the Atlantic and Arctic sea basins through REgeneRative aquaculture
COOL BLUE* - COmmunity Ocean farms and Local Business cLUstErs

Choose your fish: a campaign for responsible consumption of products from the sea, CSA - 2M€

* WP2022 projects are at the grant preparation stage

Ocean & water and arts: the contribution of creative sectors to Mission Ocean, CSA - 2M€

Call deadline for WP2023 topics: 20/09/2023



2021

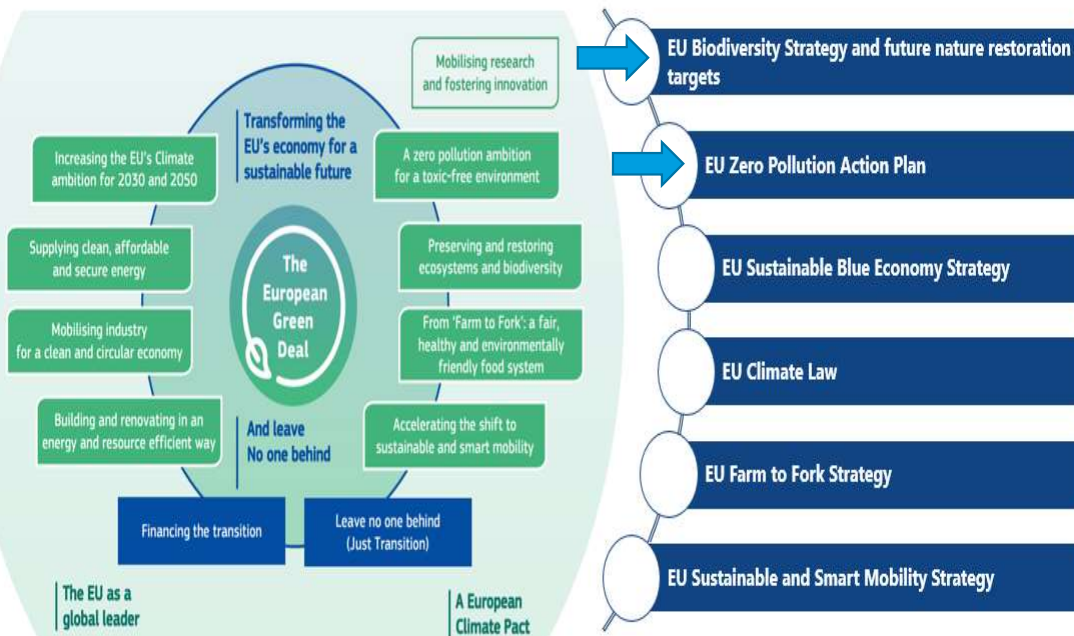
2022

2023

HORIZON-MISS-2023-OCEAN-SOIL-01-01

Joint call– Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin

POLICY CONTEXT



KEY EXPECTED OUTCOMES

- ✓ Uptake of innovative and reproducible approaches to prevent/minimize/remediate soil and water pollution from excess nutrients
- ✓ Reduced use of fertilisers
- ✓ Reduced inland and ocean eutrophication
- ✓ Empowered citizens to take action
- ✓ Support the implementation of the Marine Strategy, Water Framework and Maritime Spatial Planning Directives



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HORIZON-MISS-2023-OCEAN-SOIL-01-01

Joint call– Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin

SCOPE

- Demonstration activities addressing the landscape-river-catchment-sea system, including coastal ecosystems in the Med sea basin
- Upstream prevention and reduction of nutrient losses from soil (e.g.: reduction and substitution of traditional fertilisers; improved retention capacities, use efficiency, and integrated landscape and soil management)
- Prevention/reduction of entry of nutrients in rivers, catchment areas and estuary/sea (e.g.: green filters, wastewater treatment)
- Demonstration activities at the level of territorial units (e.g.: rural areas, urban communities, region, river basin, estuary) and considering local conditions
- Involvement of users (e.g.: land owners, soil/water managers, river manager authorities)

INDICATIVE BUDGET

Total: EUR 16 million

Per project contribution: EUR 8 million

IMPORTANT

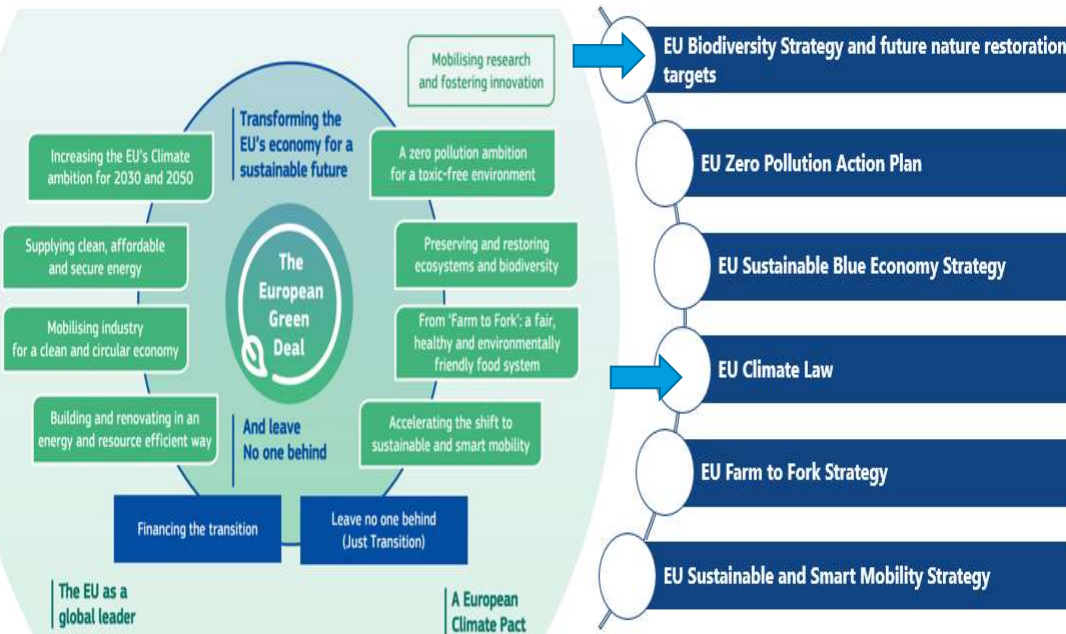
- **Additional eligibility conditions:**
 - Demo activities in min. 3 MS/ACs in the Med
 - Use of Copernicus/Galileo/EGNOS
- **Third party cascaded grants: 5 Associated regions**
- **Dissemination and training/communication activities to potential users**
- **FAIR approach to data to be made available via EMODNet**
- **Cooperation with JRC European Soil Observatory**



HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01

Joint call – Joint demonstration of an integrated approach to increasing water retention capacity at regional scale

POLICY CONTEXT



KEY EXPECTED OUTCOMES

- ✓ Increased resilience to climate change impacts on soils, waters, habitats and biodiversity
- ✓ Increased landscape/soil water retention capacity
- ✓ Enhanced mobilisation of relevant actors (e.g.: local/regional authorities, planning bodies, farmers, foresters, land owners, economic operators, citizens)
- ✓ Enhanced implementation of EU legislation/ policies: EGD, Adaptation Strategy, Biodiversity Strategy, Water Framework and Groundwater Directives, Soil Strategy



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HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01

Joint call– Joint demonstration of an integrated approach to increasing water retention capacity at regional scale

SCOPE

- Full scale-demonstration of socio-ecological approaches and NBSs to increase the landscape and soil water retention capacity, resilience to climate change, surface and ground water quality, soil health and biodiversity protection/conservation
- Multi-actor approach for demonstration activities at the level of socio-ecological territorial units covering different living/non-living systems (e.g. soil, waters, vegetation/biota, human communities)
- Planning, implementation and management of effective measures with the involvement of relevant authorities, stakeholder and communities

INDICATIVE BUDGET

Total: EUR 15 million

Per project contribution: EUR 15 million

IMPORTANT

- **Additional eligibility conditions:**
 - Demo activities in min. 3 MS/ACs
 - Multi-actor approach
 - Use of Copernicus/Galileo/EGNOS
- **Third party cascaded grants: 5 Associated regions**
- **Dissemination of best practices to end-users as well as action plan for replication/scalability**
- **FAIR approach to data to be made available via EMODNet**



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Thank you!

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