

Policy Brief 1/2025

Monitoring of the EU Mission “Restore our Ocean and Waters by 2030”

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The EU Mission “Restore our Ocean and Waters by 2030” aims to protect and restore the health of our ocean and waters. This policy brief introduces a monitoring framework that is under development to assess the impact of projects and activities funded and managed by the mission. The work is conducted as part of a Service Level Agreement between the European Environment Agency and the Directorate-General for Maritime Affairs and Fisheries.

Key messages

- The EU Mission “Restore our Ocean and Waters by 2030” is funding research and innovation activities to address most pressing challenges on European marine and freshwater ecosystems.
- The Mission has deployed an indicator-based monitoring framework to provide a qualitative and quantitative assessment of the impact of activities towards achieving objectives and targets of relevant EU policies.
- The monitoring framework will include up to 21 indicators populated with information on the expected outcomes of projects funded by the Mission.
- The first Monitoring Assessment Report will be published in September 2025 with yearly updates made available through a dedicated Science-Policy Interface on WISE Marine.

EU Mission Oceans and Water

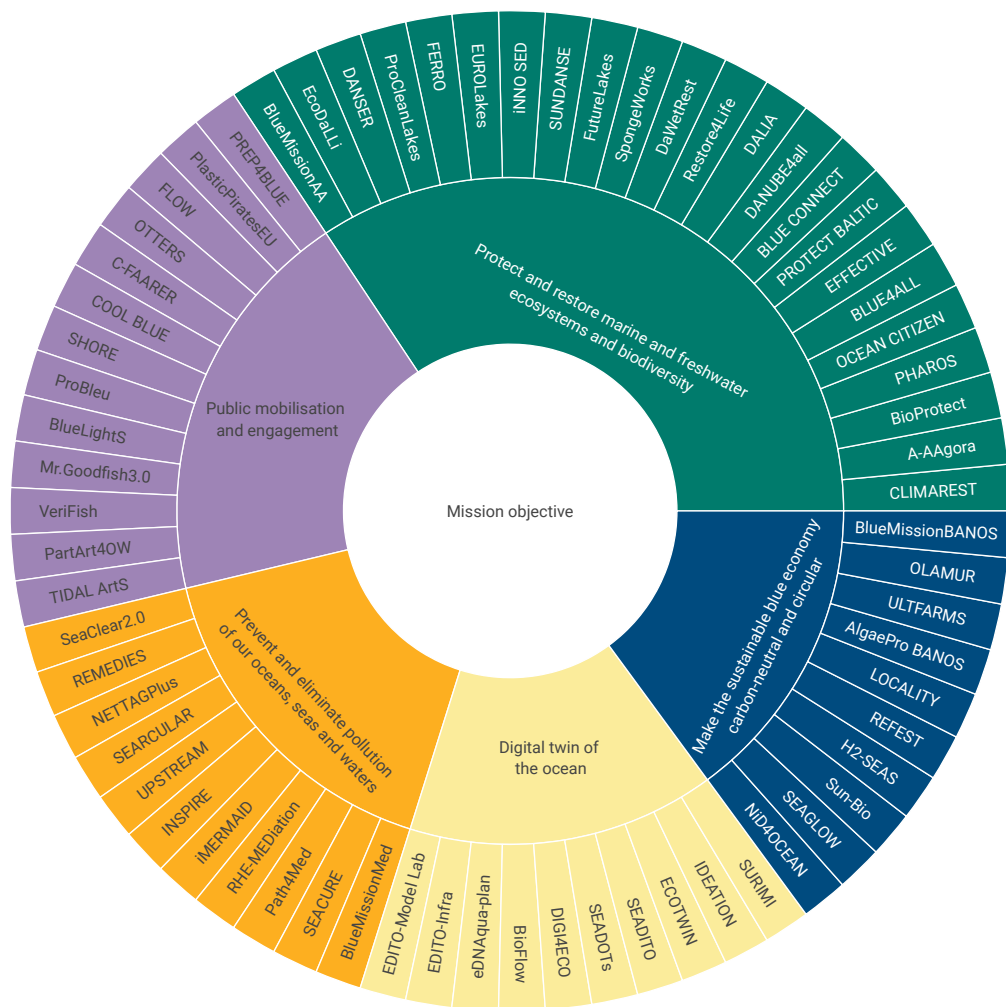
The EU Mission ‘Restore our Ocean and Waters by 2030’ ([Restore our Ocean and Waters](#)) aims to protect and restore marine and freshwater ecosystems while addressing the increasing pressure on aquatic resources through research and innovation, citizen engagement and blue investments (EC, 2021).

The Mission is part of a broader effort including a total of five EU Missions ([EU Missions in Horizon Europe](#)): Adaptation to Climate Change, Cancer, 100 Climate Neutral and Smart Cities by 2030, A Soil Deal for Europe. Mission-based public policy is a novel approach to tackle society challenges pioneered by Horizon Europe, the EU’s funding program for research and innovation for the years 2021-2027. This approach involved setting ambitious and specific yet attainable goals and directing public and private resources, research and innovation efforts, and public engagement towards meeting them with a specific timeframe (EC, 2023).

The Mission ‘Restore our Ocean and Waters by 2030’ has set up Mission “lighthouses” ([Mission Lighthouses](#)) across four major European sea and river basins: Atlantic and Arctic basin, the Baltic and North Sea basin, the Mediterranean Sea basin, and the Danube River basin. Lighthouses shall act as hubs and platforms for the development and deployment of transformative innovations of all forms – technological, social, business, governance – and integrate existing knowledge outputs and new knowledge, ensuring local business participation and citizen engagement and outreach (EC, 2021).

The Mission has funded 67 projects for about EUR 374 million under Horizon Europe 2021-2023 Work Programmes. (Figure 1). Projects are either operated under a Basin Lighthouse perspective or cross-cutting. They were selected and implemented through calls for proposals following the Horizon Europe principles of R&I excellence, competition, and impact-driven research and innovation. These projects are expected to pilot, demonstrate and deploy at scale ground-breaking research and innovation solutions while supporting their replication across Europe.

Figure 1: overview of Horizon Europe projects funded under the Mission Ocean and Waters work programmes 2021-23 and their correlation to the objectives of the Mission



The Missions has also focused at stimulating broad public mobilisation and enhancing citizen and stakeholder engagement through specific enabling actions, addressing different segment of the society, (e.g.: young people, consumers, artists etc.) and supporting citizen-science initiatives as well as deliberative democracy, social innovation awareness campaigns (EC, 2021; EC, 2023).

The Digital Twin of the Ocean, the pillar of the Mission knowledge system, shall provide readily available knowledge and monitoring services to citizens, entrepreneurs, scientists, and policymakers, thus allowing predictions and informed decisions.

Mission’s objectives and targets

The Mission objectives were designed to address European Green Deal (COM(2019) 640 final) targets for biodiversity, zero pollution and decarbonisation help addressing the three principal drivers of environmental degradation. This is a new approach where research activities are mobilized to contribute to accelerate the achievement of broad policy targets. The vision is that these activities can provide an innovation push that enables a better implementation of existing regulations, including a better monitoring of their implementation (EC, 2021).

The Mission shall thus be measured against selected targets of the EU Biodiversity Strategy for 2030 (EC, 2020), EU Action Plan Towards Zero Pollution of Air, Water and Soil (COM/2021/400 final), the European Green Deal (COM(2019) 640 final) and the European Climate Law (Regulation (EU) 2021/1119). These targets can be summarized in ten targets under three Mission specific objectives as illustrated in Figure 2.

Figure 2: Overview objectives and their targets of the Mission Oceans and Water

Objective 1	Objective 2	Objective 3
Protect and restore marine and freshwater ecosystems and biodiversity	Prevent and eliminate pollution of our oceans, seas and waters	Make the sustainable blue economy carbon-neutral and circular
Contribute to relevant marine nature restoration targets including degraded seabed habitats and coastal ecosystems	Reduce nutrient losses by 50%	Achieve net zero maritime emissions
Protect at least 30% of the EU's seas and integrate ecological corridors, as part of a true Trans-European Nature Network	Reduce the use and risk of chemical pesticides by 50%	Develop zero-carbon and low-impact aquaculture
Strictly protect at least 10% of the EU's seas	Reduce plastic litter at sea by 50%	Promote circular, low-carbon multi-purpose use of marine and water space
Restore at least 25,000 km of free/flowing rivers	Reduce by 30% microplastics released into the environment	
Related policy: EU Biodiversity Strategy 2030	Related policy: Action Plan Towards Zero Pollution	Related policy: European Green Deal European Climate Law

While delivering on these objectives and targets, the Mission is expected to contribute to the implementation of existing EU legislation, notably of the Common Fisheries Policy (Regulation (EU) No 1380/2013 EC), the Marine Strategy Framework Directive (Directive 2008/56/EC), the Water Framework Directive (Directive 2000/60/EC), the Nature Directives (Nature Restoration Regulation (EU) 2024/1991, the Habitats Directive 92/43/EEC), and the Common Agricultural Policy (Regulations (EU) 2021/2116, 2021/2115 and 2021/2117). Thus, their implementation progress and the achievement of their quantitative targets will provide a measure for the success of the Mission. Moreover, the Mission is expected to contribute to upcoming reviews of relevant policies and in the development of new ones (EC, 2021).

This highlights that the Mission shall support and contribute towards the achievement of a broad range of EU policies. In addition, the Mission can help to identify synergies and trade-offs across the EU policies.

Monitoring framework

This policy brief introduces a monitoring framework that is being developed to quantify the impact of projects and activities supported by the Mission towards reaching objectives and targets of relevant EU policies. This will apply indicators which are representative of the selected targets as well as consistent with EU policies and their existing monitoring frameworks. A draft list of the Mission specific indicators is presented in Table 1.

The monitoring framework includes both qualitative and quantitative assessment of the impact of the projects for each indicator. Indicators are populated with information on the expected outcomes of projects, as described in their technical annexes submitted during proposal phase. When available, existing indicators on the status of environment published by the EEA will be used as a baseline to inform the assessment on the contribution of mission's projects.

An example of an indicator fact sheet for Marine protected areas is shown below. All other indicators will be published as part of the first Monitoring Assessment in September 2025 and they will be updated regularly to track progress during the lifespan of the Mission. The assessment as well as all other relevant publications of this monitoring framework will be made available through a dedicated Science-Policy Interface for the EU Mission Oceans and Waters in WISE Marine ([WISE Marine](#)).

Table 1: Overview of indicators to be used to monitor the Mission Oceans and Water with corresponding EU Policy's objective and target, and existing monitoring frameworks and policies applying these indicators.

Objective 1: Protect and restore marine and freshwater ecosystems and biodiversity

Target	Indicator	Related policy
Contribute to relevant marine nature restoration targets including degraded seabed habitats and coastal ecosystems	Marine restoration to enhance biodiversity	Biodiversity Strategy 2030, Nature Restoration Regulation, Habitats Directive, Marine Strategy Framework Directive
Contribute to relevant marine nature restoration targets including degraded seabed habitats and coastal ecosystems	Marine restoration: financing, ecosystem services, and monitoring	Biodiversity Strategy 2030, Nature Restoration Regulation, Habitats Directive, Marine Strategy Framework Directive
Protect at least 30% of the EU's seas and integrate ecological corridors, as part of a true Trans-European Nature Network	Marine protected areas	Biodiversity Strategy 2030, Habitats Directive, Marine Strategy Framework Directive
Strictly protect at least 10% of the EU's seas	Marine strictly protected areas	Biodiversity Strategy 2030
Restore at least 25,000 km of free/flowing rivers	Floodplains and wetlands with restored connectivity	Biodiversity Strategy 2030, Nature Restoration Regulation, Water Framework Directive
Restore at least 25,000 km of free/flowing rivers	Rivers restored into free-flowing rivers	Biodiversity Strategy 2030, Nature Restoration Regulation, Water Framework Directive

Objective 2: Prevent and eliminate pollution of our oceans, seas and waters

Target	Indicator	Related policy
Reduce nutrient losses by 50%	Nitrate in rivers	Biodiversity Strategy 2030, Zero Pollution, Water Framework Directive, Marine Strategy Framework Directive
Reduce nutrient losses by 50%	Total phosphorous in lakes	Biodiversity Strategy 2030, Zero Pollution, Water Framework Directive, Marine Strategy Framework Directive
Reduce the use and risk of chemical pesticides by 50%	Chemical pesticides in water environments	Zero Pollution, Water Framework Directive, Marine Strategy Framework Directive
Reduce plastic litter at sea by 50%	Litter in marine ecosystems	Zero Pollution, Marine Strategy Framework Directive
Reduce plastic litter at sea by 50%	Litter in freshwater ecosystems	Zero Pollution, Marine Strategy Framework Directive
Reduce by 30% microplastics released into the environment	Microplastic released to the environment	Zero Pollution, Water Framework Directive, Marine Strategy Framework Directive

Objective 3: Make the sustainable blue economy carbon-neutral and circular

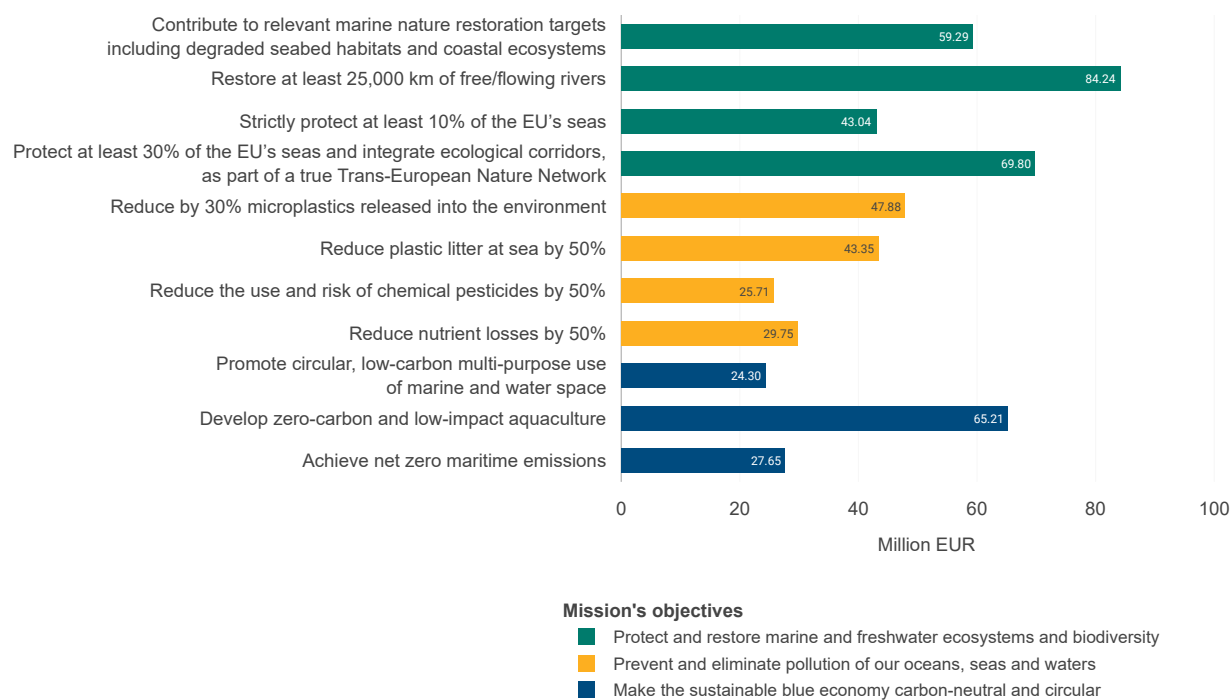
Target	Indicator	Related policy
Achieve net zero maritime emissions	CO2 emissions from maritime transport	European Green Deal, Marine Strategy Framework Directive, Climate Law, Zero Pollution
Develop zero-carbon and low-impact aquaculture	Sustainable fishing gears	European Green Deal, Marine Strategy Framework Directive, Climate Law, Common Fisheries Policy
Develop zero-carbon and low-impact aquaculture	Sustainable aquaculture practices	European Green Deal, Marine Strategy Framework Directive, Climate Law, Common

Target	Indicator	Related policy
		Fisheries Policy
Promote circular, low-carbon multi-purpose use of marine and water space	Areas with optimized and sustainable use of marine space	European Green Deal, Maritime spatial planning, Climate Law, Marine Strategy Framework Directive

Assessing the impact of Mission’s projects

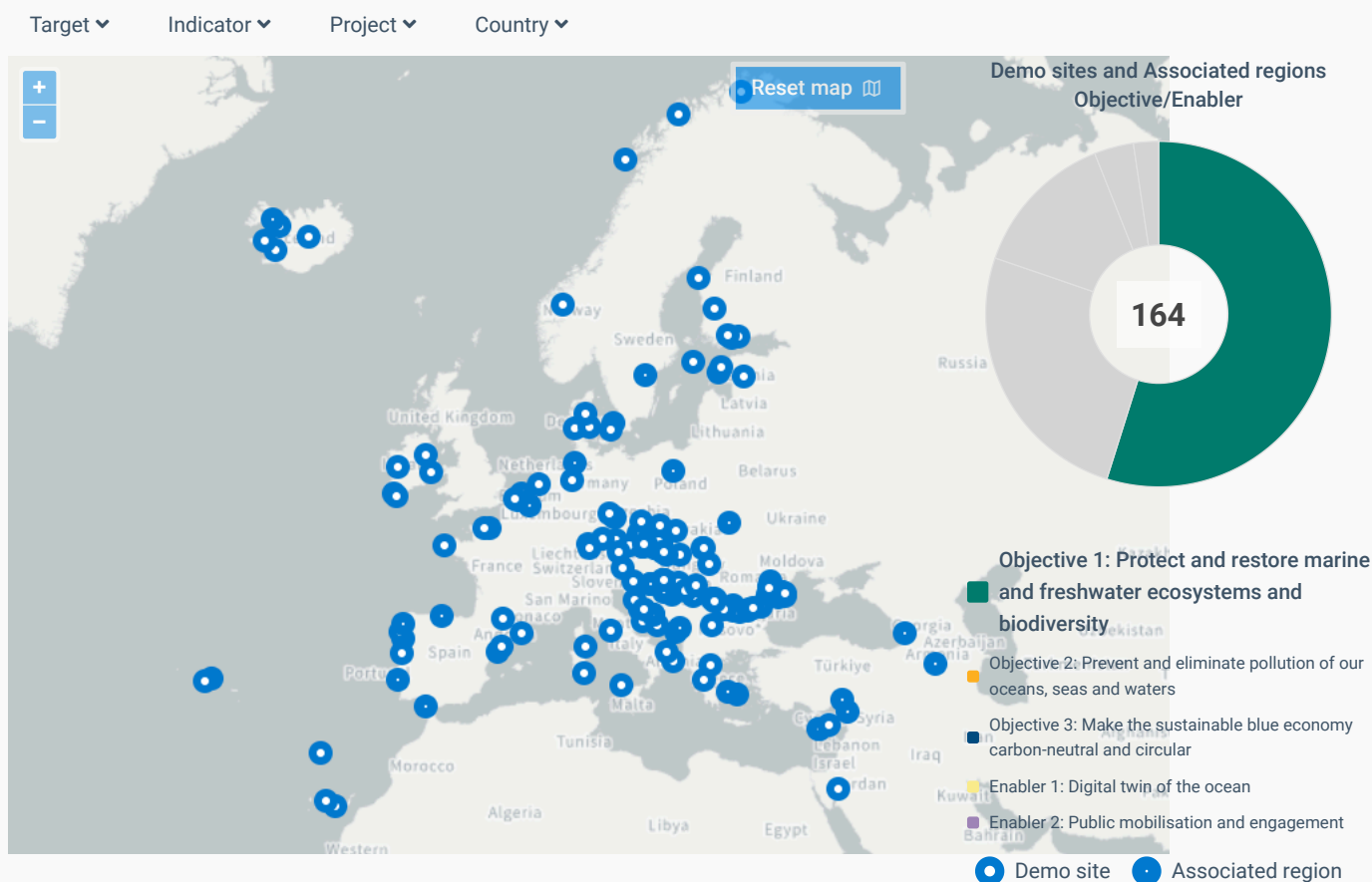
The following section provides a first insight on the assessment being prepared for the First Monitoring Assessment. Since most of the funded projects are ongoing, the expected outcome of these 67 projects directly funded and managed by the Mission in 2021-2023 have thus been analysed. Figure 3 shows the cumulative distribution of the Mission’s projects funding whose outcomes are expected to have a quantifiable impact towards reaching specific objectives and targets. The contribution is displayed using the committed funds by the Mission and accounts for the cumulative contribution of projects across several targets: thus, the displayed total sum of funding is higher than the Mission budget. This highlights that the Mission has so far supported projects that address the entire spectrum of targets assigned to the Mission, as described in the previous chapter.

Figure 3: Bar chart showing the distribution of funding provided by the Mission Oceans and Water in relation to its objectives and targets



Regional distribution of activities is an important aspect when assessing the impact of Mission’s activities on policies’ targets and objectives that shall be met at EU level. 838 project participants from all EU Member States, 14 Associated Countries and 3 non-Associated third Countries are involved in the development and implementation of these 67 projects. Innovation solutions and new technologies are expected to be tested on a broad network of more than 300 demo sites across EU Member States and Associated Countries for demonstration and real-time testing (see Map 1). In addition to demo sites, projects are planning to further demonstrate and replicate solutions in more than 130 sites through the Associated regions scheme. This scheme helps to raise awareness and boost capacity development in less-developed areas and/or allow to demonstrate solutions in similar or complementary conditions to the one experienced in demo sites. Thus, activities conducted in projects are expected to cover a broad range of geographies while fostering collaboration across several regions and sea basins.

Map 1: Overview of Mission's demo sites and associated regions



It is important to highlight that EU policies' objectives and targets, against which the Mission is assessed, are broader than the scope of the Mission and their achievement cannot stand on the Mission funding and projects alone. As detailed by EC (2021), the Mission activities are "expected to provide an innovation push through technologies development, test of best practices, and knowledge sharing that enables a better implementation of EU regulations".

In addition to activities directly funded by the Mission, several EU, national, and regional programs and a wide range of stakeholders are working towards addressing common objectives and targets as demonstrate by the about 800 actions pledged under the Mission's Charter ([Mission Charter](#)). By endorsing the Charter, Member States, regions, local authorities, international partners and stakeholders are expressing political support and real engagement, taking concrete measures and mobilising bottom-up actions and resources. This indicates that there is a broad range of support and efforts towards addressing the Mission's objectives and targets beyond projects directly funded by the Mission budget. Pledges under the Mission's Charter will however not be included as part of the assessment conducted for the First monitoring assessment report.

References

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Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law') (<https://eur-lex.europa.eu/eli/reg/2021/1119/oj>) accessed 7 January 2025.

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