

BLUE MISSION BANOS

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



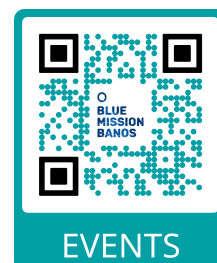
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Programme



3rd MISSION ARENA
26-27 November 2024
Amsterdam, Netherlands

REGIONAL FOCUS AREA 3
THE NETHERLANDS
BELGIUM
DENMARK | WEST
GERMANY | WEST
FRANCE | NORTH

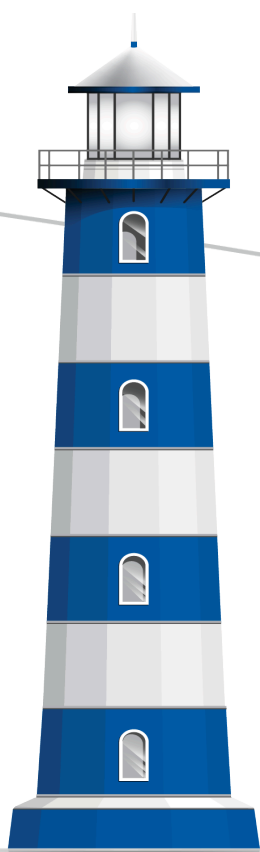


TUESDAY, 26 NOVEMBER 2024

Time	Location	Title	Topic
9:15-10:45	Hall 1 - The Plenary	Opening Session Setting the Scene for the Mission Ocean and Waters in the Arena 3 Region	Mission Ocean & Waters
11:15-13:00	Hall 1 - The Plenary	Mariparks: Derisking entrepreneurship and the sustainable blue economy	Offshore Wind/Multi-Use
11:15-13:00	Hall 2 - The Space	Co-designing actions and guidelines to reinforce citizen engagement in the Mission Ocean and Waters	Citizen Engagement/ Education
11:15-13:00	Hall 3 - The Suite	Life Cycle Assessments in the Blue Bioeconomy: Ecosystem services and carrying capacity	Blue Bio Resources
11:15-13:00	Hall 4 - The Apartment	Filling the gaps: Discussing pathways for effective Mission Ocean Governance - INVITATION ONLY	Governance
13:00-14:00	Lunch Break		
14:00-15:45	Hall 1 - The Plenary	Viable and scalable business models "Business for Blue Good"	Business Support
14:00-15:45	Hall 2 - The Space	Connecting seas: Cooperation and tools for EU Marine Protected Areas	Marine Protection & Restoration
14:00-15:45	Hall 3 - The Suite	Reconciling offshore wind and biodiversity targets: Are we on track to realise the European Green Deal?	Governance
14:00-15:45	Hall 4 - The Apartment	Collaboration to enhance marine security in turbulent times	Secure & Digital Ocean

TUESDAY, 26 NOVEMBER 2024

Time	Location	Title	Topic
16:00-17:45	Hall 1 - The Plenary	Demonstration of the Digital Twin of the Ocean and its capabilities	Secure & Digital Ocean
16:00-17:45	Hall 2 - The Space	Leading the Way: Marine nature restoration advancements, challenges and needs in the North Sea region	Marine Protection & Restoration
16:00-17:45	Hall 3 - The Suite	Small or large scale: What are the governance implications evolving from Offshore Wind Energy development in the North Sea?	Governance
16:00-17:45	Hall 4 - The Apartment	Co-creating minimum requirements for Nature- Based Solutions in EU marine and coastal environments	Marine Protection & Restoration
18:00-20:00	Evening Reception		



WEDNESDAY, 27 NOVEMBER 2024

Time	Location	Title	Topic
9:15-15:30	Hall 2 - The Space	Sustainable Blue Economy Partnership Regional Workshop - Blue Economy for the North Sea	Mission Ocean & Waters
9:15-11:00	Hall 1 - The Plenary	Mentoring and technology exchange for supporting the regional blue bioeconomy: What do blue bio startups and companies really need?	Business Support
9:15-11:00	Hall 3 - The Suite	Stakeholder engagement in innovative marine solutions: Marine conservation management, financing and beyond	Marine Protection & Restoration
9:15-11:00	Hall 4 - The Apartment	Feasibility & beyond: Investing in and developing Recirculating Aquaculture Systems	Blue Bio Resources
11:15-13:00	Hall 1 - The Plenary	Upscaling ocean multi-uses through co-management and operational alignment between Low Trophic Aquaculture and Offshore Wind	Offshore Wind/Multi-Use
11:15-13:00	Hall 3 - The Suite	Workshop on environmental advocacy and justice	Citizen Engagement/ Education
11:15-13:00	Hall 4 - The Apartment	The blue on land: Agricultural applications of algae produced with circular resources	Blue Bio Resources

WEDNESDAY, 27 NOVEMBER 2024

Time	Location	Title	Topic
13:00-13:45	Lunch Break		
13:45-15:30	Hall 1 - The Plenary	Green messaging for blue growth: How can we communicate the sustainability benefits of algae products to customers, end users and regulators?	Blue Bio Resources
13:45-15:30	Hall 3 - The Suite	Blue horizons for young wavemakers: Exploring career pathways in the blue economy	Citizen Engagement/ Education
13:45-15:30	Hall 4 - The Apartment	Enhancing seaweed aquaculture governance: Working with public authorities to improve licensing and regulatory frameworks in the North Sea	Governance
15:45-17:00	Hall 1 - The Plenary	Final Session: Voting on the Arena 3 Roadmap	Mission Ocean & Waters

This event is supported by





Sustainable Blue
Economy Partnership

SUSTAINABLE BLUE ECONOMY PARTNERSHIP REGIONAL WORKSHOP

Wednesday, 27 November 9:15–15:30

Time	Title
9:15–9:35	Setting the scene: The role of the Sustainable Blue Economy Partnership in complementarity to the EU Mission Ocean and Waters
9:35–10:30	Session 1: Multi-use for blue economy sectors in the North Sea
10:30–11:00	Session 2: Blue bioresources for circular economies
11:15–12:10	Session 3: Digital twins for sustainable blue economies
12:10–13:00	Session 4: Managing sea uses for a thriving North Sea
14:00–15:00	Session 5: Enhancing the resilience of coastal communities and businesses
15:00–15:30	Conclusions



The analysis provides an overview of **projects that align with the objectives of the EU Mission “Restore our Ocean and Waters by 2030”** and have been implemented by organisations located in Belgium, the Netherlands, France (North), Germany (West), and Denmark (West). The analysis includes 187 projects with starting dates between January 2014 and October 2024. The information on projects was sourced from the EC Portfolio Analysis of the Mission Ocean, the Mission Charter Actions, and stakeholder websites. Note that the overview is not exhaustive. The list of analysed projects is available on the BlueMissionBANOS website.

Please visit the SUBMARINER or Mission Implementation Platform stands during the 3rd Mission Arena to have your project or you as an individual registered for:



The **Mission Charter**, an opportunity to showcase your engagement in the Mission Ocean;



WaveLinks, an interactive dashboard mapping projects relevant for the Mission Ocean;



BlueBioMatch, a match-making platform for all engaged in blue bioeconomy activities.

MISSION CHARTER ACTIONS

The Mission Charter Actions include programmes, projects and initiatives pledged to contribute to the Mission Ocean. Currently, it lists 696 Actions from across Europe, with 61 Actions supported by Belgium, the Netherlands, France, Germany, and Denmark taking place in the North/Baltic basin (Fig.1). Overall budget allocated for these 61 actions is approximated to 456 million euros (Fig.2).*

61

Mission Charter Actions in North/Baltic basin

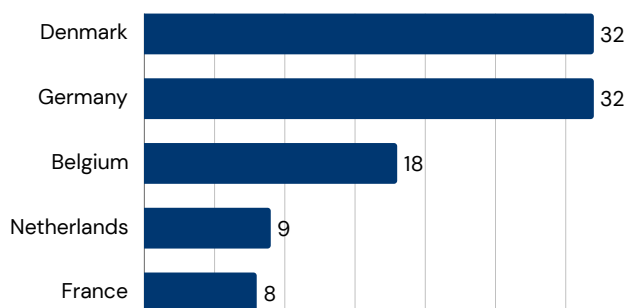


Fig.1 – Number of actions by country

€ 456.1M

budget of the Actions

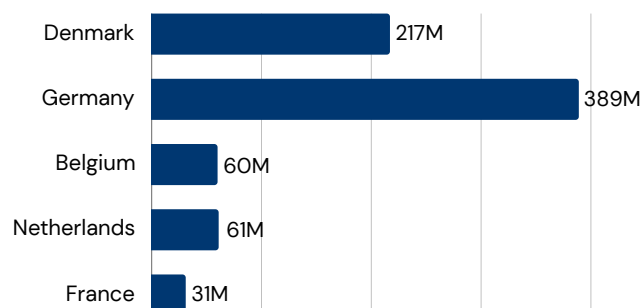


Fig.2 – Budget of actions by country

*European Commission. Mission Ocean and Waters. [online] Available at: https://maritime-forum.ec.europa.eu/theme/research/mission-ocean-and-waters_en [Accessed 14 November 2024]

PROJECTS

187 total projects

112 ongoing projects

75 completed projects

The analysed projects have been supported by the EU funding programmes, such as Horizon 2020, Horizon Europe, EMFAF and Interreg, as well as other funding programmes provided by public or private institutions in the BANOS regions (Fig.3).

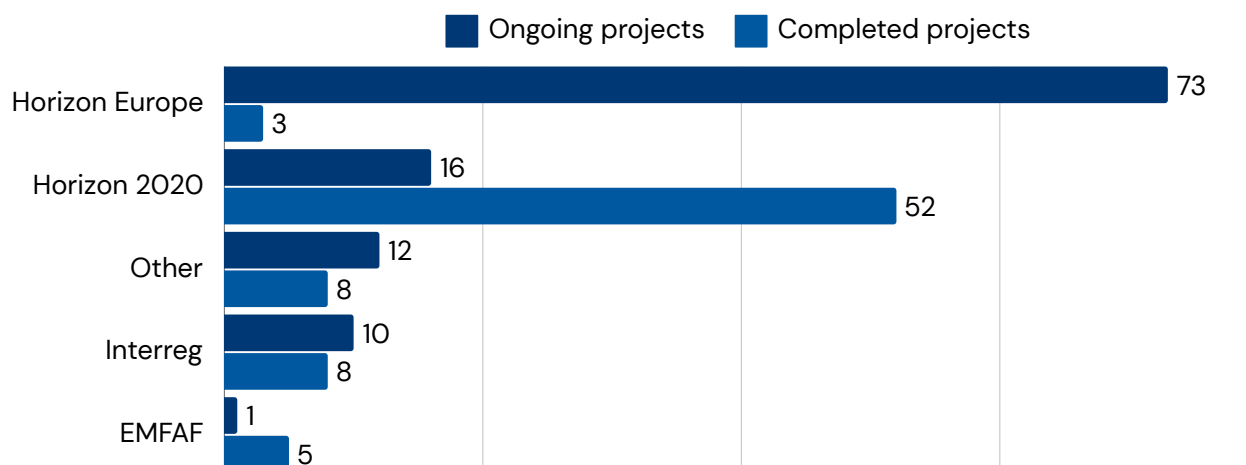


Fig.3 – Number of ongoing projects by funding programme

The analysed projects addressed themes considered relevant for the advancement of the Mission Ocean within the regional focus of the 3rd Mission Arena 265 times, with some projects attributed to two or more themes (Fig.4).

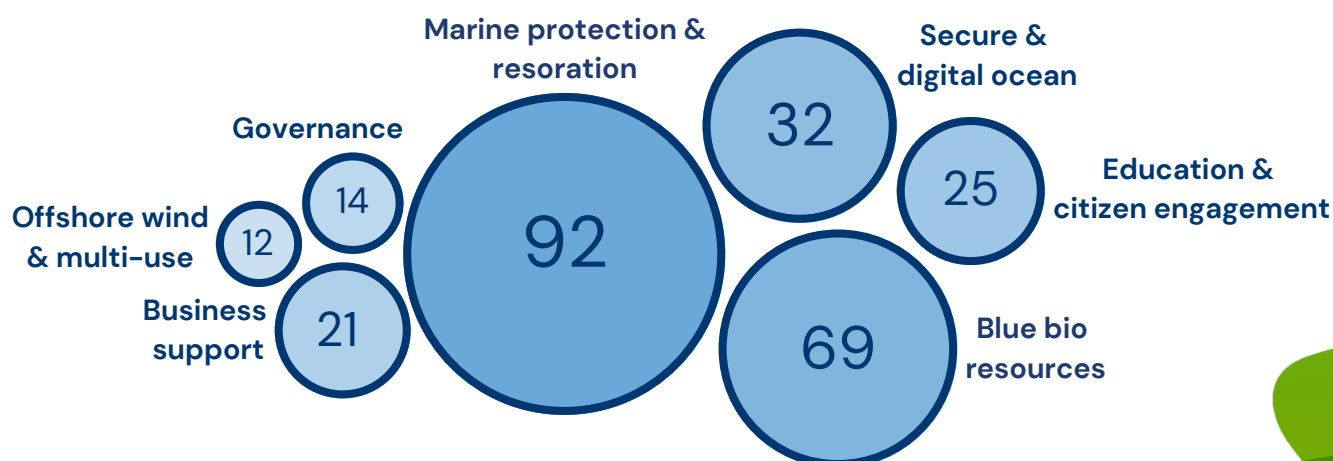


Fig.4 – Number of projects by theme

BUDGETS



The budget of the analysed projects is approximated to 1.38 billion euros (Fig.5). Some funding programmes, especially many national and regional programmes, are not reflected in the analysis, meaning that the real budget is higher than reflected here.

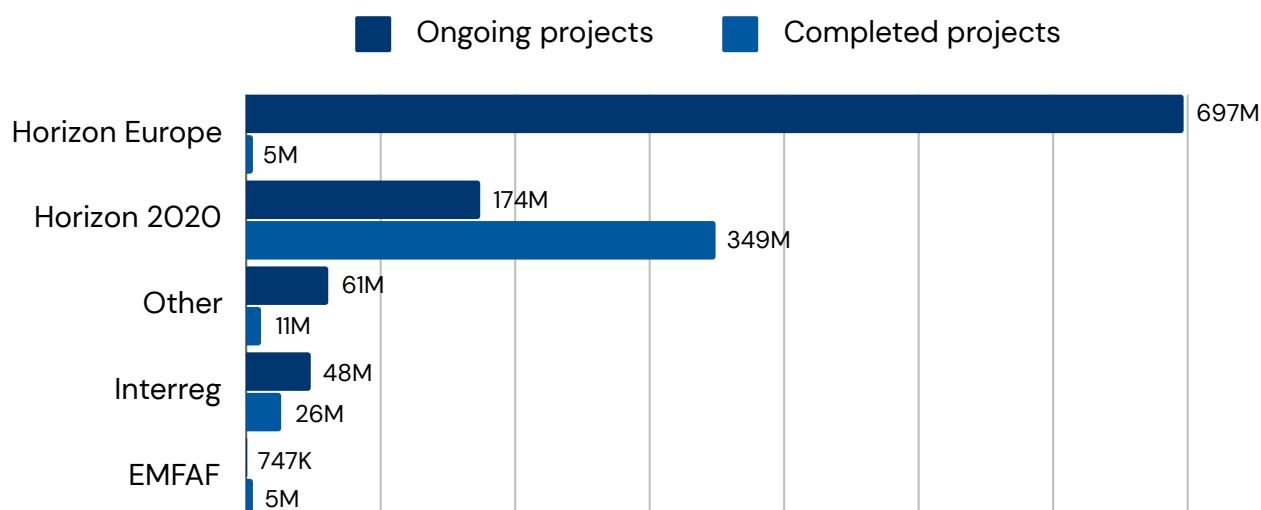


Fig.5 – Budget of ongoing projects by funding programme

The budgets have been distributed between the relevant themes mentioned above (Fig.6). Since some projects belong to several thematic areas, their budgets were counted several times.

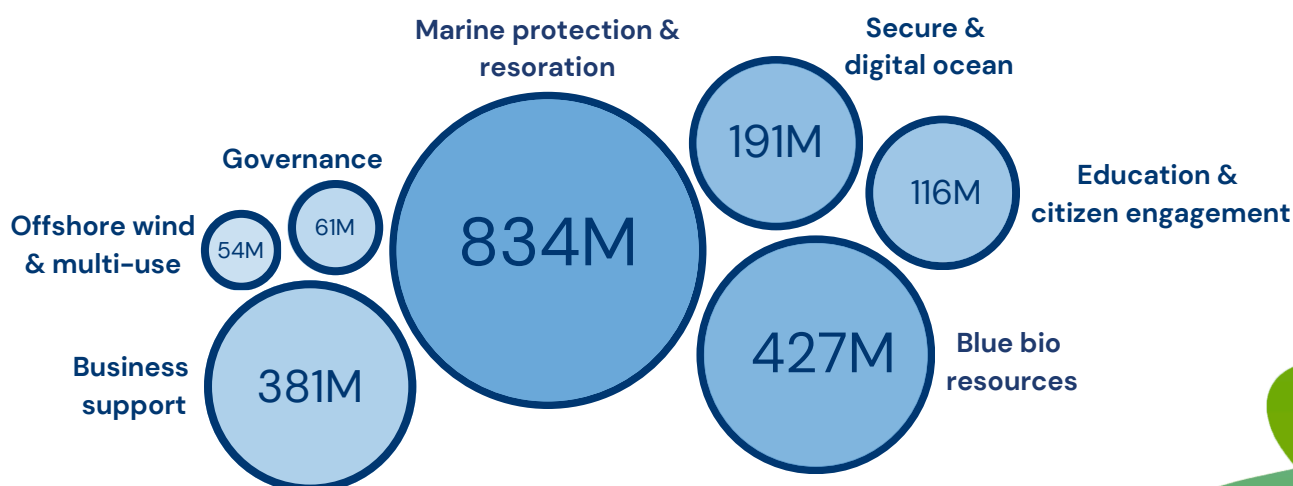


Fig.6 – Budget of ongoing projects by theme

ACTORS

308 actors from Belgium, the Netherlands, France, Germany, and Denmark



The analysed projects involved 308 actors from Belgium, and the Netherlands, as well as specific regions of France (North), Germany (West), and Denmark (West).^{*} The actors represent various sectors and include public authorities, municipalities, research institutions, universities, small and medium-sized enterprises, and NGOs.

-  **125 actors** from Belgium in 122 projects
-  **118 actors** from the Netherlands in 114 projects
-  **41 actors** from Germany in 49 projects
-  **19 actors** from France in 37 projects
-  **5 actors** from Denmark in 5 projects

The following organisations are listed as **top 5 actors** by amount of projects they were part of:

Wageningen University & Research (WUR)	45
Flanders Marine Institute (VLIZ)	22
Ghent University	21
Deltares	21
French Research Institute for the Exploration of the Sea (IFREMER)	21

^{*}More actors from Germany and Denmark can be found in the list of projects analysed for the Mission Arena 1 here: <https://bluemissionbanos.eu/projects-in-the-banos/>

BlueMissionBANOS

The **BlueMissionBANOS** coordination and support project aims to inspire, engage, and support all relevant actors and initiatives across the Baltic and North Sea Lighthouse Area to take the necessary actions to make the Blue Economy carbon-neutral and circular while eliminating pollution and restoring biodiversity. These are the core objectives of the EU Mission Ocean, "Restore our Ocean and Waters by 2030."

This Mission Arena was organised by the BlueMissionBANOS **project partners based in the North Sea region**, headed by the lead coordinator of the project, the **SUBMARINER Network**.



Action Points for the North Sea

Prior to the Mission Arena, workshop organisers collaborated to write action points for each of our seven thematic areas. Over the course of the two days, you as participants will have the opportunity to revise and fine tune these action points for the North Sea region. What steps need to be taken to achieve a more carbon-neutral and circular blue economy?

In the final plenary session, we will vote on the revised action points, creating a prioritised list of steps forward for the North Sea region. These final action points will be published in our **Roadmap for the North Sea Region** and distributed to policymakers, institutions, and projects to create an impact in our region.

Offshore Wind/Multi-Use

In the North Sea, where diverse sectors like fishing, renewable energy, shipping, and tourism compete for marine space, ocean multi-use (MU) is emerging as a vital strategy for balancing demands and mitigating environmental pressures. North Sea nations, including the Netherlands and Belgium, are beginning to prioritize MU in their policies to enhance spatial efficiency and reduce ecological impacts (i.e. 'Gebiedspaspoorts'). Notably, offshore wind farms are being considered for multi-use applications, combining renewable energy generation with low-trophic aquaculture, such as seaweed or shellfish farming and/or passive fishery, to promote sustainable seafood production. Although in its early stages, this concept is gaining traction through pilot projects aimed at optimizing space, improving efficiency, and fostering environmental stewardship.

Action Points

- 1) **Designate multi-use zones in Maritime Spatial Plans.** Build on the examples of 'Area Passports' (Netherlands) and 'CIA Zones' (Belgium). Consider multi-use at very early stages of planning to allow for true joint planning of all uses. Integrate the ecosystem precautionary principle and be aware of the sequence of how the various uses need to be installed when designating MU areas.
- 2) **Undertake baseline assessments of the whole area (not just punctual),** which serves the purpose for all possible uses. Also undertake joint monitoring efforts.
- 3) **Simplify regulatory frameworks** with a clear licensing roadmap. Ideally establish one-stop shops. Consider Mariparks as tangible and practical solution to enhance multi-use.
- 4) **Integrate incentives for multi-use projects** in OWP tenders. Include non-price criteria as well as nature-inclusive design as basic principles.
- 5) **Strengthen cross-sector blue economy stakeholder dialogue structures** to reduce siloed approaches. Build on the already good 'Communities of Practice' examples in the region.
- 6) **Support multi-use business models** that enhance economic and environmental benefits and enable different blue economy sectors to work together. Address financial de-risking with insurance options.
- 7) **Provide public support for the necessary investments** in demonstration infrastructure for new uses (i.e. low-trophic aquaculture, passive fishery) in exposed offshore areas.
- 8) **Promote the transnational planning of the North Sea.** Improve consideration of transnational aspects, impacts and joint projects. Create a common understanding of the underlying concepts (i.e. multi-use, impact assessments, incentives) and agree on joint principles, where necessary.

Blue Bio Resources

There is a long tradition of using blue bio resources in the North Sea. Pressure on land-based resources and increasing demand means their importance is growing. This needs to work alongside the expanding offshore energy sector in the basin, as well as increasing storm surge intensity resulting from climate change. Meanwhile, there is an intensive agricultural sector in the region, and a need to diversify and reduce waste streams.

Action Points

- 1) **Review, update and simplify existing practices** in aquaculture licensing processes.
- 2) **Develop transparent, robust and accessible Life Cycle Assessment** standards for blue bio economy products to quantify and substantiate Green Claims.
- 3) **More research on modelling** of biological pathways and impacts.
- 4) **Prioritise economic diversification** in the production of sustainable blue resources including low trophic aquaculture and the blue on land.
- 5) **Move towards a zero-waste approach** by incentivising symbiotic industrial, agricultural and aquaculture systems.
- 6) **Create a level playing field** for agriculture and aquaculture with regards to regulation and subsidy.
- 7) **Acknowledge biodiversity** as a core prerequisite for a sustainable blue bioeconomy.

Marine Protection & Restoration

The North Sea region has invested significant efforts in marine protection and restoration, largely driven by environmental EU and national policies. Many countries bordering the North Sea have established Marine Protected Areas (MPAs), though enforcement and coverage vary widely. Overfishing, pollution, heavily used shipping routes, extraction activities, coastal development and climate change remain substantial threats, and despite numerous success protection and restoration practices, marine habitats loss and biodiversity degradation remains a challenge. Projects to protect and restore habitats such as seagrass beds and oyster reefs are underway, aiming to bolster coastal ecosystems, improve carbon sequestration, and support marine life. However, balancing conservation goals with economic activities remains a central challenge, and coordination among North Sea countries is essential to achieving lasting conservation.

Action Points

- 1) **Broaden stakeholder inclusion** in marine protection, prioritising input from underrepresented sectors. Use models like the Dutch North Sea Agreement as a model to guide stakeholder cooperation in other regions.
- 2) **Empower local communities** through collaborative establishment, management and monitoring of MPAs.
- 3) **Advance integrated marine protection and restoration** within the blue economy by fostering transparent communication, coordinated research, and collaborative governance to align stakeholder efforts.
- 4) **Enhance outreach and education** on marine restoration needs costs and benefits, highlighting positive contributions from blue economy sectors like energy. Focus on educating policymakers, legislators, and the public about the North Sea's state, and reduce (regulatory) barriers to restoration efforts.
- 5) **Increase funding for marine restoration**, and support innovation in technology. This includes R&D in pollution control, energy-efficient shipping, and habitat restoration tools, as well as establishing funding programs for startups and research institutions to develop innovative technologies and solutions.
- 6) **Coordinate local and regional restoration efforts** to guarantee their successful implementation and foster cooperation. Allocate more resources and time to stakeholder engagement processes.
- 7) **Strengthen enforcement** for marine protection and restoration by establishing robust regulatory frameworks and monitoring protocols.
- 8) **Create incentives for sustainable industry practices**. Encourage sustainable practices in industries like fishing, shipping, and tourism through incentives such as tax benefits, subsidies for sustainable technology adoption, or recognition programs.

Governance

The spatial location as a marginal sea of the Atlantic Ocean and the Wadden Sea as one of the last remaining large-scale tidal ecosystems make the North Sea something unique. But large-scale Offshore Wind Energy development, oil and gas production, fishing and increasing maritime traffic, among other human activities – the ecosystem of the North Sea is subject of strong pressure from various human activities. Appropriate concepts and governance structures are therefore needed to meet future challenges.

Action Points

- 1) **Better coordination** between all countries around the North Sea including non-EU countries in Marine Spatial Planning processes. For reasons of transparency, this should also include an exchange of developments in the respective EEZ.
- 2) **Take a sea basin approach** to tackle climate change and the ambitions of the Green Deal at the political and policy levels.
- 3) **Develop region-specific solutions** on a basis of interdisciplinary scientific findings and transdisciplinary dialogues. This requires tailor-made funding programmes that aim to close the most important research gaps and develop transdisciplinary long-term dialogue structures.
- 4) **Establish a transnational governance structure** to support the implementation of the Ocean & Waters Mission and other regional development issues. This can also be a network of actors mandated with this task by the respective governments.
- 5) **Use existing structures** like networks or sector specific associations more effectively. At the same time, cross-sectoral and interdepartmental collaboration should be fostered.
- 6) **Publicise innovative concepts** such as the Maripark more widely. Against the background of mutual learning, knowledge about best practice examples should be transferred beyond the regions to a greater extent.
- 7) **Create suitable regulations and financing instruments** that are flexible and adaptable enough to realise new concepts. A proof-of-concept approach in the sense of feasibility studies could be integrated into the regulatory system.

Business Support

Regulatory and legal obstacles, such as complex permitting and limited support frameworks, create inefficiencies and add costs for emerging sectors. High operational and installation costs, combined with insufficient funding mechanisms, limit capital access for innovative projects, especially in circular value chains. Technological gaps persist, with inadequate solutions for sustainable aquaculture, resource utilisation, and waste management. Furthermore, international competition, market perception issues, and limited consumer awareness restrict local product expansion. Lastly, a lack of skilled labour and necessary training frameworks impedes workforce development in these emerging sectors.

Action Points

- 1) **Simplify Regulations and Permitting Processes:** Streamline regulatory frameworks and establish a unified permitting process to reduce administrative burdens and accelerate sustainable business development.
- 2) **Enhance Funding and Capital Access:** Introduce supportive financial instruments and incentivise investments in high-risk aquaculture and circular value chains to attract private and public capital.
- 3) **Strengthen Technological Innovation:** Foster R&D partnerships and provide targeted support for technologies that promote resource efficiency, sustainable aquaculture, and waste valorisation.
- 4) **Boost Market Awareness and Consumer Education:** Implement marketing and educational campaigns to improve consumer understanding and demand for sustainably sourced and locally produced marine products.
- 5) **Develop Workforce Training and Education Programmes:** Establish specialized training and marine science educational programs to build a skilled workforce, addressing current labor shortages and knowledge gaps.
- 6) **Promote Cross-Sectoral Collaboration:** Encourage collaboration between stakeholders, including research, industry, and consumers, to enhance integration and innovation across the value chain.

Citizen Engagement/Education

The connection of citizens with the ocean is complex and diverse, and many citizens are unaware of the importance of the ocean in their lives. This discrepancy represents a barrier to catalyse the scale of change required to reverse the degradation of our ocean and waters and to boost a sustainable blue economy. In the North Sea region, we aim to maximize citizen engagement and education by supporting those who are already active while stimulating new players to act more effectively.

Action Points

- 1) **Integrate Ocean Literacy programs** into early education curricula to raise awareness of marine ecosystems, conservation, and sustainable use of marine resources.
- 2) **Establish regional blue economy hubs** that bring together students, researchers, and professionals from industry and academia.
- 3) **Offer courses and workshops in entrepreneurship** focused on the blue economy for university students and young professionals.
- 4) **Attract more young people to growing blue economy sectors** and raise the profile of the blue economy as an exciting place to build a career.
- 5) **Create collaborative frameworks with vocational training centres** to inform, upskill, and reskill the workforce for the blue sector, with special attention to people in need of employment and NEETs.
- 6) **Create and strengthen the dialogue** and longevity of the interaction between citizens and other local stakeholders.
- 7) Avoid overwhelming the public by **seeking synergies between existing engagement platforms**, initiatives and events, and making use of a targeted approach that takes into account the bigger picture.
- 8) Citizen or public engagement activities often involve the usual suspects and representatives of citizen groups, instead of 'real' citizens or inhabitants. A **clear definition of the target audience** and more detailed strategies and tools to engage with the general public should be included in initiatives and projects.

Digital and Secure Ocean

Marine infrastructures such as offshore energy facilities, underwater cables, ports and fairways are increasingly essential for economic growth and sustainability. In times of rising geopolitical tensions, this dependency can expose unexpected vulnerabilities, requiring increased monitoring and protection of these infrastructures. Collaboration among stakeholders has never been more vital. At the same time, the European Commission aims to make ocean knowledge accessible to all: empowering them to become partners in knowledge generation by facilitating interactions in the pursuit of a healthy and productive ocean. From policymakers to citizen scientists, different users can use and bring their local information, data and models into the Digital Twin Ocean platform to generate knowledge and predict future scenarios. This local and tailored information will in turn enrich the global data set.

Action Points

- 1) **Develop policies to enhance collaboration** between government agencies and private sector entities through secure and voluntary data-sharing initiatives, particularly for marine data and other critical infrastructure.
- 2) **Encourage the collaborative development of advanced technological innovations** by leveraging scientific research and marine data to enable real-time infrastructure surveillance, threat detection, and coordinated response capabilities across sectors.
- 3) **Promote innovation programmes** to collaboratively develop new security solutions, explore co-existence and multifunctionality of infrastructure to enhance resilience and address emerging threats more effectively.
- 4) **Enhance cross-border collaboration** by establishing a regional security platform on a sea-basin level to share knowledge, build trust, explore solutions, share funding opportunities and enable partnerships between public and private actors.
- 5) **Define and agree on roles and responsibilities** between states, authorities and private actors in relation to the monitoring and surveillance of marine and offshore infrastructure to enable effective protection.
- 6) **Integrate more data and data lakes** into the Digital Twin platform to contribute to the development of ocean numerical models.
- 7) **Promote FAIR data** (Findable, Accessible, Interoperable, Reusable).
- 8) **Develop and integrate new and existing applications** on the Digital Twin platform.

Notes

BLUE MISSION BANOS

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Funded by
the European Union