



**BLUEMISSION AA**

Building a coordination hub to support the mission  
implementation in the *Atlantic and Arctic Basin*

# **D4.4**

## **Recommendations for future development of Smart Specialisation Strategies**



This project has received funding from the European Union's  
Horizon Europe Research and Innovation programme under  
Grant Agreement number 101093962.

## Document Information

<b>Project Name</b>	BlueMissionAA – Building a coordination hub to support the Mission implementation in the Atlantic and Arctic Basin
<b>Grant Number</b>	101093962
<b>Deliverable number</b>	D4.4
<b>Deliverable title</b>	Recommendations for future development of Smart Specialisation Strategies
<b>WP number</b>	WP4
<b>Deliverable due date</b>	30.04.2024
<b>Submission date</b>	18.06.2024
<b>Dissemination levels</b>	Public
<b>Lead beneficiary</b>	CPMR
<b>Author(s)</b>	Mathilde Maure (CPMR)
<b>Contributors</b>	Elise Wattrelot, Justine Brossard (CPMR), Valerie de Liedekerke
<b>Internal reviewers</b>	NA

## Document history and changes

Version	Date	Author	Description
0.1	26.03.2024	Mathilde Maure	First version
0.2	24.04.2024	Mathilde Maure, Elise Wattrelot, Justine Brossard	Comments and edits

0.3	15.05.2024	Mathilde Maure, Elise Wattrelot	Comments and edits
1.0	25.05.2024	Elise Wattrelot, Mathilde Maure	Edits
1.1	17.06.24	Elise Wattrelot, Mathilde Maure	Consolidated version
1.2	07.08.25	Elise Wattrelot, Valerie de Liedekerke	Updated version

**Authors** | Mathilde Maure, Élise Wattrélot

**Publisher** | NA

**How to cite** | *BlueMissionAA Recommendations on how to align regional innovation smart specialisation strategies with the EU Mission Ocean & Waters objectives, CPMR 2024*

Supported by/In partnership with



## Table of Contents

Document Information .....	2
Document history and changes .....	2
List of Acronyms .....	5
1. Why these BlueMissionAA recommendations? .....	6
2. State of play of the alignment of Atlantic and Arctic S3 with the Mission Ocean .....	9
3. Recommendations to the Atlantic & Arctic Regions to further align S3 with Ocean Mission objectives.....	14
4. Recommendations to the European Commission .....	18

## List of Acronyms

Acronym	Meaning
CCDR	Comisión de Coordinación y Desarrollo Regional
CPMR	Conference of Peripheral Maritime Regions
CSA	Coordination and Support Actions
EMFAF	European Maritime, Fisheries and Aquaculture Fund
ERDF	European Regional Development Fund
EU	European Union
HE	Horizon Europe
RIS3/S3	Regional Innovation Smart Specialisation Strategy
R&I	Research and Innovation
SDGs	United Nations Sustainable Development Goals
WP	Work Package

# 1. Why these BlueMissionAA recommendations?

Waters and Oceans are not only the sources of biodiversity and unique habitats, they also provide essential services to human societies by providing food, unlocking clean energy potential and regulating global temperatures.

In this context and in line with the EU Green Deal, the European Commission released in September 2021 a Communication on the EU Mission Restore Our Ocean and Waters by 2030<sup>1</sup>. The Mission Ocean is part of the five Mission Areas and is designed both as a tool to deliver on the EU's 2030 targets for protecting and restoring marine and freshwater ecosystems, and as a novel approach to direct public and private resources, research and innovation efforts and public engagement towards three objectives:

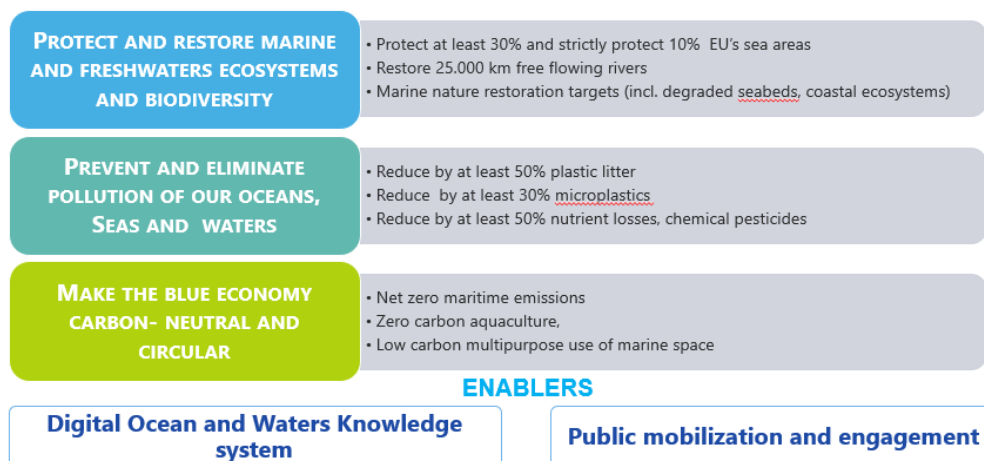


Figure 1. Diagram of Mission Ocean objectives and targets

These objectives are supported through the establishment of four “lighthouses” in the main European sea-basins to pilot, demonstrate and deploy solutions at scale. The lighthouses are coordination hubs (also called CSAs, Coordination and Support Actions) made to support the harmonised development and deployment of research works, innovations and blue investments at a sea-basin scale, supported by the Horizon Europe programme.

In the Atlantic and Arctic sea basins, a specific focus has been set on the objectives 1) preserving and restoring marine and coastal ecosystems and 2) enhancing biodiversity for an increased climate resilience. In order to implement these objectives, two dedicated projects have been funded by the Mission Ocean through Horizon Europe: CLIMAREST (on coastal

<sup>1</sup> [https://research-and-innovation.ec.europa.eu/document/download/d6162cbd-6d09-48fd-b5b4-d7d2be69972c\\_en?filename=ocean\\_and\\_waters\\_implementation\\_plan\\_final.pdf](https://research-and-innovation.ec.europa.eu/document/download/d6162cbd-6d09-48fd-b5b4-d7d2be69972c_en?filename=ocean_and_waters_implementation_plan_final.pdf)

resilience) and A-AAGORA (nature-based solutions for climate adaptation and biodiversity preservation). Both projects are supported by the BlueMissionAA project which acts as the CSA for the Atlantic and the Arctic to ensure their scalability, as well as by Prep4Blue project which is the overarching CSA for all Mission Ocean's initiatives in all the European sea-basins.

Both CSAs aim at acting "as an inclusive, systemic, and transformative initiative that bundles existing efforts at EU, national and regional levels (...) overcoming fragmented governance frameworks and supporting key legislation and policies in marine, maritime and freshwater domains". To connect with the regional level, the Ocean Mission set up the concept of "associated regions" to allow replication of solutions in different regions supported by a small budget. However, as stated in the Communication "EU Missions two years on: assessment of progress and way forward", there is a need to act on remaining challenges notably regarding governance, and the ability of the Mission Ocean to leverage other sources of funding.

In this recommendation paper, the BlueMissionAA project partners share their reflections on the remaining efforts to achieve this goal of bundling efforts with the regional level. In particular, it will take stock of the achievements and functioning of the Regional Smart Specialisation strategies (S3) which are considered as the main instrument to orient regional R&I efforts, acting as a strategic driver of regional development.

It will analyse how S3 already embed the three objectives of the Mission Ocean (*protect and restore marine ecosystems ; prevent and eliminate ocean pollutions; develop sustainable blue economy*) and what lessons could be drawn from the results of BlueMissionAA and from the Atlantic and Arctic lighthouse projects (CLIMAREST, A-AAGORA) to boost regional efforts towards the achievement of the Mission Ocean's objectives.

This paper will take the shape of a two-way recommendation:

- On the one hand, the paper will direct to Arctic and Atlantic Regional authorities and will provide hints on how to connect the Ocean Mission tools and results for the benefit of their S3 ecosystems (part 3);
- On the other hand, the paper will address the European Commission and will identify pathways to improve links and governance mechanisms between the Ocean Mission and the Regional Smart specialization strategies and related platforms/committees developed by the regions to support endogenous innovations (part 4).

This paper goes deeper than the Prep4Blue deliverable 5.1 "Critical assessment and key recommendations for Interregional financing" by collecting more precise data on Atlantic and Arctic S3. Prep4blue has only considered a sample of Atlantic Regions who responded to the survey launched by the project (Azores, Norte, Pays de la Loire, Galicia, Brittany, Madeira,

Lisboa e Vale do Tejo), and no Arctic Region. To build up a larger European analysis, this paper will further analyse the potential alignment of these regions' S3 with the Ocean Mission objectives and adapting the Prep4Blue recommendations to the specificities of the Atlantic and Arctic Regions.

In order to have the most adequate orientations, these recommendations will be updated in 2025, in D4.4 – Recommendations for future development of Smart Specialisation Strategies (update), based on BlueMissionAA's additional results.

### **Memo -Prep4Blue Recommendations**

- Exploit the full potential of RIS3 priorities on marine and freshwater ecosystems restoration: S3 priorities can be upgraded towards this objective, and interregional partnerships can boost the development of new technologies in this area.
- Most regions consulted have S3 priorities aligned with the Mission Ocean's Objective 2 on the reduction of pollution, which represents a high potential for interregional partnerships in this area. Regions are recommended to explore collaboration opportunities.
- Interregional partnerships on shared S3 related to the Mission's Objective 3 on a circular and carbon-neutral sustainable blue economy also have great potential:
  - o Enhance collaboration on marine renewable energy and explore multi-use scenarios based on the BANOS lighthouse innovation projects.
  - o Foster interregional collaboration on a circular and sustainable model of fisheries and aquaculture and the decarbonisation of maritime activities, with strong synergy with the European Maritime Fisheries and Aquaculture Fund (EMFAF).
- Another promising area for interregional collaboration is strengthening knowledge of ocean and water ecosystems, contributing to the digital twin of the ocean.
- Interregional governance can be improved with the creation of a R&I ecosystem of stakeholders specialised in the blue economy area.
- Further practices in the development of regional funding mechanisms on innovation in the sustainable blue economy should be encouraged (partnership state/region).
- A stronger involvement of regional authorities in the preparation of EMFAF expenditures would favour the harmonisation of R&I funding among the regions so that synergies with the R&I component of the EMFAF fund are increased.
- Furthermore, regional authorities can apply to be associated regions to Mission Ocean-funded Horizon Europe projects in different lighthouses, learning from pilot regions and receiving grants to conduct actions that tackle challenges linked to Mission Ocean's objectives. On this aspect, we can stress that the eligibility criteria under the calls for associated regions should be more flexible to provide the opportunity for regions from other sea basins to participate, notably EU outermost regions.

### 3. State of play of the alignment of Atlantic and Arctic S3 with the Mission Ocean

---

Smart Specialisation Strategies aim at boosting regional growth by enabling each region in Europe to identify and develop its own competitive advantages based on three pillars, namely localisation (place-based approach of the advantages and needs of the territory), prioritisation (focus on territory-related investment priorities) and participation (stakeholders from the quadruple helix must engage throughout the implementation of the strategy)<sup>2</sup>. The S3 process results in the identification by the regions of economic sectors with the most innovation potential. This allows regions to focus their investments – in particular ERDF funding – on a limited number of identified innovation priorities, therefore ensuring the development of their industrial and innovation ecosystem based on their own strengths<sup>3</sup>.

In order to implement these strategies, a particular emphasis is put on the governance process of S3 to ensure their quality. Each region must establish consultation bodies with clear rules of participation and the possibility for each stakeholder, from each sector and sub-sector, to take part in the entrepreneurial discovery process. S3 development is therefore a real bottom-up process involving key socio-economic stakeholders of a given region.

S3 in the Atlantic and Arctic areas have included sustainability considerations to ensure that regions' support to innovation is environmentally compatible. This has taken different shapes in the S3 documents of coastal regions, with variable attention to the specific issue of restoring oceans and waters. The following paragraphs will give an analysis of how Missions Ocean's objectives stand in Atlantic and Arctic S3.

#### Atlantic S3

This section will focus on analysing Atlantic RIS3 from Spain (Canarias, Andalucia, Asturias, Cantabria, Euskadi, Galicia, Navarra), Portugal (Azores, Madeira, Alentejo, Algarve, Centro, Lisboa e Vale do Tejo, Norte), France (Bretagne, Nouvelle-Aquitaine, Pays de la Loire) and Ireland (national). All the Regions, except Navarra which does not have a maritime façade, include a priority on sustainable blue economy in their S3, aligned with the Ocean Mission's objective n°3. The chosen blue sectors vary from one region to another but generally fisheries

---

<sup>2</sup> [https://ec.europa.eu/regional\\_policy/policy/communities-and-networks/s3-community-of-practice/about\\_en](https://ec.europa.eu/regional_policy/policy/communities-and-networks/s3-community-of-practice/about_en)

<sup>3</sup> [Joint Research Centre, The Smart Specialisation Policy Experience: Perspective of National and Regional Authorities, 2021](#)

and aquaculture, marine renewable energy, sustainable coastal tourism, boats of the future and blue bioeconomy are the most quoted sectors in Atlantic Regions' S3<sup>4</sup>. However, the Ocean Mission is generally not quoted in the S3, proving that the choice of S3 corresponds to regional endogenous strengths. Some Atlantic Regions contemplate a priority on water management (Alentejo, Nouvelle Aquitaine, Andalucia, Asturias), which include an environmental dimension, but not only (water supply for example). Most of them do not contemplate a specific priority on protecting and restoring marine or freshwater ecosystems and biodiversity but address environmental principles transversally in all priorities. A focus on ocean pollution appears in some Atlantic S3 as well.

	Spain							France			Portugal						Ireland	
	Canarias	Andalucia	Asturias	Cantabria	Euskadi	Navarra	Galicia	Bretagne	Nou-Aq	PDL	Azores	Madeira	Alentejo	Algarve	Centro	LVT	Norte	All
Protect and <u>Restore</u> marine and freshwater ecosystems and biodiversity			x				x	x		Focus ecosystemic services of aquaculture	x	x			x	x		
Prevent and <u>eliminate</u> pollution of our ocean		x						x Mainly prevention & risk monitoring		x		x			x	Focus on marine litter		
Make the sustainable blue economy carbon-neutral and circular	x	x	x	x	x		x	x	x Fisheries Aquaculture mainly	x	x	x	x	x	x	x	x	x
Quoting the Ocean mission in S3							x							x				

As seen in the table above, most of the regions do not expressly mention the Mission Ocean in their strategy except for Centro and Bretagne.

- [Centro S3](#) dedicates one paragraph to the alignment of the S3 with the EU Missions and specifically the Ocean Mission recognizing a “natural alignment” with their S3 subdomain “Water”.
- [Bretagne S3](#) highlights three main objectives under “Maritime Economy for a Blue Growth” which are (1) Strengthen regional excellence on the energy transition for and through the maritime world; (2) Increase innovation capacities in maritime security of seas and oceans and coastal management; (3) Develop biotechnologies and marine bioresources. In this chapter it highlights different European cooperation dynamics such as the Ocean mission and set as goal to position Brittany among the major regions in

<sup>4</sup> CPMR Technical Paper, Atlantic Smart Specialisation Strategies: Commonalities, differences and the way forward to boost cooperation, January 2021

international and European competition, and strengthen Breton companies and scientific skills in the sector and attract new ones.

As per the other Atlantic Regions, it is noteworthy mentioning that:

- **Lisboa e Vale do Tejo's** strategy recommends strengthening marine ecosystem restoration and preservation actions through the installation of artificial reef in the maritime and port infrastructure, the use of new eco-friendly materials for construction, or the transition to new business models for a climate neutral industry.
- **Alentejo, Nouvelle Aquitaine, Centro & Andaluçia's** S3 foresee a differentiated domain on water, involving the water cycle management for a sound consumption and protection of the resource.
- **Asturias's** S3 envisages water management and preservation and restoration of ecosystems, including coastal marshes, so that they can act as sinks.
- **Madeira's** S3 contemplates as priority Circular Economy, Energy Transition, Climate Action and Biodiversity. As an archipelago, the blue dimension is mentioned under this priority although not being the only dimension (e.g. mountain).
- **Andaluçia** Regional Ministry for Environment and Sustainability holds competencies in coastal and marine biodiversity. Although these actions are not reflected in the Region S3 (particularly because they are funded with different objectives from the ERDF Program), this issue could be further mainstreamed in S3 sectors identified by the Region, involving the Regional Trade Agency, which is the body responsible for the S3, and the Department of Agriculture, Fisheries, Water, and Rural Development, which is competent in the area of blue economy.

Most of the regions have developed governance mechanisms to gather triple helix stakeholders to contribute to the entrepreneurial discovery process. They often include stakeholders involved in the maritime economy. Below is an outlook on possible different format of involvement:

- **Galicia**, strategic decision-making and planning are strongly centered around governmental bodies. Galicia region also counts on some citizen science initiatives related to the sea (Platform for Marine Citizen Science: Marine Observers: [Observadores del Mar](#)). Other governance initiatives involve blue economy sectors such as fisheries, seafood processing and marketing and existing consolidated network of FLAGs

(GALPs). It is worth to mention that Galicia is one of the unique cases in Europe where a cross-border region (the Euroregion Galicia-Norte in Spain and Portugal respectively) has developed a cross-border RIS3 which includes a blue economy dimension (e.g. priority on Marine Renewable Energy). This is the second edition and it has enabled to strengthen the cooperation and exchange of knowledge and innovation among many stakeholders in this area. Find out more at: [Inicio - Cross-Border Smart Specialisation Strategy of Galicia – Northern Portugal \(RIS3T\) \(ris3t-galicianortept.eu\)](https://ris3t-galicianortept.eu).

- **Ireland** set up a Smart Specialisation Implementation Group bringing together regional and national policymakers, linking both levels to achieve EU priorities. This group is overseen by the Department of Enterprise, Trade and Employment (DETE) of the Irish National Government and aims at gathering the information from local and regional levels in their implementation of the Regional Enterprise Plans, which governance process gathers companies and research centers acting on maritime topics.
- **French Regions** use Regional Consultative Committees for Research and Technological Development (CCRRDT) to link research, higher education, innovation, training, companies and public stakeholders on the implementation, decision and monitoring of the S3. These committees are divided into various commissions (energy, industry, biology...) and gather academic and economic stakeholders from the region, including maritime stakeholders such as universities, maritime institutes, technology centres and marine energy clusters. It is worth noting that Bretagne created a Collective for Research and Innovation of Maritime Economy which gathers the regional authority and the research and economic stakeholders (marine renewable energy institute, engineering and European maritime institutes).

## Arctic S3

This section will focus on analysing Arctic Regions S3 from continental European Arctic Regions in Finland (Lapland), Norway (Nordland, Troms and Finnmark counties, despite Norway not having S3 as in the EU), and Sweden (Norrbotten, Västerbotten). Norway is not an EU Member, however the regional strategies of Nordland, Troms and Finnmark counties are mostly inspired by S3 principles although do not entirely correspond to the same methodology as other EU Arctic regions in Finland and Sweden.

In general, Arctic Regions pay attention to environment in their S3 but in a transversal way, and do not contemplate a specific focus on the protection of the marine and freshwater ecosystems, except for Troms og Finnmark. However, most of them have a specific sustainable blue economy focus. None of them expressly mention the Ocean Mission in their RIS3.

	Finland	Norway		Sweden	
	Lapland	Nordland	Troms and Finnmark	Norrboten	Västerbotten
Protect and Restore marine & freshwater ecosystems & biodiversity			x		
Prevent and eliminate pollution of our ocean					
Make the sustainable blue economy carbon-neutral and circular	x		x	x	x
Quoting the Ocean Mission in S3					

As per the table's above, Arctic Regions have developed strategies increasingly focusing on sustainability challenges, aligning their S3 with the European Green Deal and placing green and digital transitions at the heart of their strategies. Due to the particularly vulnerable ecosystems they shelter, most Arctic S3 have environmental considerations that are disseminated into the various priorities of the S3. While in some S3 biodiversity and ecosystem preservation is not mentioned at all (in particular among Norwegian innovation strategies, that slightly differ from EU-Members S3), Swedish and Finnish S3 include sustainable development into their economic and industrial activities such as mineral extraction, refining industries and tourism that are particularly damaging to marine ecosystems. They also consider SDGs as a framework for their S3. For instance:

- Lapland S3 recognises the role of the region as an Arctic living environment, in which development efforts are constantly pursued in close interaction with inhabitants and the Arctic nature. However, Lapland S3 for 2023-2027 does not expressly dedicate a part of the strategy to the preservation of marine ecosystems, climate resilience or reduction of waste pollution.
- Norrbotten S3 is mainly oriented towards nature-based economy, using mineral and forestry resources as well as energy infrastructure as the financial backbone of the region's development. Digitalisation, advanced research, tourism and businesses development are key aspects of the strategy. It recognises the risk of regional conflicts for land use and competition for natural resources, emphasizing the need to avoid negative impacts on the environment in all activities, despite not expressly mentioning the Mission Ocean in its Smart Specialisation Strategy.

- Västerbotten S3 mentions that "Innovations are needed to solve challenges and conflicting objectives that may arise from, for example, land use and biodiversity in the transition to a greener economy", emphasizing that the mineral industry, forestry and aquaculture have a great potential for green transition.

If we consider various examples of regional S3 governance schemes, it can be noted that the main challenge at the Arctic level on S3 governance is linked to isolated local communities, which are often well aware of ecosystems preservation needs, while not having the capacity to be involved in the entrepreneurial discovery process of their region's S3. For instance:

- Lapland S3 involves stakeholders through the "Arctic Development Environments" Cluster which encompass universities, regional agencies, technology park and natural resources institute, which launch regional innovation projects driven by an environmental criteria.
- In Norway, Troms and Finnmark counties have a strong research and development ecosystem in cities like Tromsø, well linked to local needs and natural resources. However, it is more difficult for more isolated stakeholders to be involved in the S3 implementation as they have a distant access to industrial and research centres. Norrland Research and Development Strategy also emphasizes that the peripheral condition of the region makes it more difficult to attract additional researchers and companies but created a new university "Nord University" that closely works with businesses and companies in order to increase the region's development at research and at technical level.
- Finnmark has specific conditions for industrial development based on natural resources, particularly in inland areas, as these areas are used by Sami communities (lands protected by international law) and jointly owned and governed by the Finnmark county council and the Sami Parliament. This constitutes a specific context for S3 management including sustainability issues. This challenge can also be found in Norrbotten S3 which includes many references to cooperation with Sami populations.

## **4. Recommendations to the Atlantic & Arctic Regions**

---

Based on the previous analysis of S3 in Arctic and Atlantic Regions and their link to the objectives of the Ocean Mission, one could draw the following recommendations to regional authorities to support a greater alignment of their S3 to the Mission Ocean's objectives, in the

Page 14

interest of making the most of EU funding opportunities in R&I for the benefit of local ecosystems.

- 1 **Quoting the Mission Ocean in the S3** of the regions which already includes a specific priority on Protecting and Restoring marine and freshwater ecosystems and biodiversity, Preventing and eliminating pollution of our ocean and/or making the sustainable blue economy carbon-neutral and circular. This may help regional ecosystems to get to know and seize funding opportunities emanating from the Ocean mission.

Implementation detail	Organize workshops to present the Ocean mission to the S3 Board dealing with Blue Economy
Indicator	Number of regions which presented the Ocean Mission to Regional S3 Boards

- 2 **Upgrading S3 priorities with more considerations for restoring oceans and waters** in maritime regions which already include an environmental priority but do not make a specific focus on maritime and freshwater ecosystems. For instance, the Arctic Regions could detail how the blue dimension is taken into account in their priority on environment. The Atlantic Regions could detail how their priorities on circular economy also apply to the restoration of waters and ocean. For instance, they could enhance innovations in relation to the prevention of fishing gears losses and selective nets impacting less the marine biodiversity.

Implementation detail	Regional R&D Departments organise a consultation with their regional stakeholders and thematic departments on the potential of the regions to mobilize on restoring oceans and waters
Indicator	Number of additional references to marine and freshwater ecosystems in S3

- 3 **Organizing exchanges with those Regions interested to include Ocean Mission objectives in their RIS3 post 2027.** Although the Ocean Mission references are light in the S3 documents of CCDR-Centro and Brittany Regions, there may be an interest of those regions to brainstorm with others on to go beyond quoting the Ocean Mission in S3 and initiatives to put in place so that it can benefit their own regional ecosystems.

Implementation detail	CCDR-Centro and Brittany Region get involved in a Peer Learning Exercise with other regional authorities to discuss best practices to attract Horizon Europe funding for protecting and restoring marine and freshwater ecosystems and biodiversity, presenting pollution of the ocean and making blue economy carbon neutral and circular
Indicator	A conclusions document deriving from the Peer Learning Exercise

**4 Reinforcing stakeholders co-operation (“entrepreneurial discovery process”) related to Water and Sea**, as exemplified by the Britany's Collective for Research and Innovation of Maritime Economy. The functioning of stakeholder co-operation is one of the key criteria to achieve a good governance of S3 by 2027. More efforts could be made to strengthen the specific involvement of stakeholders involved in maritime issues to S3 governance schemes and processes. This recommendation is particularly relevant for Arctic regions with no clear blue S3 dimension although being maritime regions. This would allow stakeholders involved in the blue sectors or protection of marine environment to access resources, funding and knowledge to increase the scale of their initiatives.

Implementation detail	Develop a protocole in which regions maps stakeholders involved in the blue economy, preservation/restoration of marine and freshwater ecosystems and biodiversity.
Indicator	Number of new “Blue” stakeholders groups created in Europe

**5 Use the BlueMissionAA analysis and the Prep4Blue catalogue<sup>5</sup> on citizen engagement** to increase the participation of citizen to the RIS3 governance settings related to the Ocean Mission objectives. Potentially, in these regions which do not have such governance setting around maritime issues, involving citizens from coastal areas may increase consideration of ecosystem preservation and restoration. Citizen engagement examples can be found on WaveLinks to be replicated in various regions across the Atlantic and the Arctic. Their variety (world

<sup>5</sup> [https://prep4blue.eu/wp-content/uploads/2023/05/PREP4BLUE-Toolbox-for-Citizen-Engagement\\_V1.pdf](https://prep4blue.eu/wp-content/uploads/2023/05/PREP4BLUE-Toolbox-for-Citizen-Engagement_V1.pdf)

cafés, workshops, debates, activities such as clean-ups, etc.) allows to adapt each solution to the local context.

<b>Implementation detail</b>	Register in WaveLinks
<b>Indicator</b>	Number of regional S3 experts registered on WaveLink

- 6** Use the results of BlueMissionAA to get inspiration to transfer innovation in the field of the Ocean Mission from one regional ecosystem to another. As an example, BlueMissionAA identified the 3D Pare project (Interreg Atlantic Area, 2017-2021) which developed 3D printing solutions to create artificial reefs, particularly in the Santander Bay. It allowed to direct market investments towards low-impact technologies and bio-receptive materials based on natural and renewable raw materials, to preserve marine biodiversity<sup>6</sup>. On WaveLinks, it is also possible to find examples of innovations for sustainable blue economy such as the PROMYC project which developed solutions, via Swedish companies, to develop high-protein food for farmed fish (aquaculture) via the growth of fungi species based on residual waste flow from food, aquaculture, pulp or paper.

<b>Implementation detail</b>	Create regional challenges to solve and source innovative solutions on WaveLinks
<b>Indicator</b>	Number of regional S3 experts using WaveLink

- 7 Use the result of CLIMAREST to get inspiration on nature-based solutions that could be replicated in different regions.** CLIMAREST contributed to restoring Arctic coastal communities affected by erosion, thanks to the re-used timber from decommissioned mines in the area and the installation of seawalls made of wood. CLIMAREST also showed the benefit of establishing “blue spaces”, i.e. maritime spaces protected from human activity, next to ports or marine energy production sites, to preserve biodiversity, while ensuring beneficial economic activities in ports.

<b>Implementation detail</b>	Present CLIMAREST to specific regional stakeholders' groups dedicated to environment protection
<b>Indicator</b>	Number of CLIMAREST solution transferred in other regions

<sup>6</sup> <https://www.giteco.unican.es/proyectos/3dpare/index.html>

- 8 Enhance cooperation with partners outside a given Region** in areas of the Ocean Mission. In particular, the Atlantic and Arctic S3 analyses have shown that the management of water has lots of potential for collaboration in the Atlantic. The management of wetlands could be the object of transnational collaboration in the Arctic, as many wetlands need to be protected or restored. It is to be noted that enhancing collaboration with partners outside a given Member State is also one of the 7 criteria of good governance of S3 to achieve by 2027, therefore being a key driver for effective S3 in the Atlantic and Arctic.

<b>Implementation detail</b>	Region express interest under I3 tool to collaborate with other regions on areas linked to the Ocean mission
<b>Indicator</b>	Number of I3 projects linked with the Ocean mission's objectives
<b>Case Study</b>	In the Atlantic, a good example of interregional cooperation for the preservation of the Ocean is the IBIROOS observatory (Iberia-Biscay-Ireland Operational Oceanographic System) which allows to link universities, research centers, regional authorities, national agencies and ports to monitor the good state of waters, provide forecasts of climate impacts in aquaculture locations or provide risk assessment plans for coastal management.

## 5. Recommendations to the European Commission

---

Based on the previous analysis of S3 in Arctic and Atlantic Regions and their link to the objectives of the Ocean Mission, one could draw the following recommendations to the European Commission to support a greater alignment of the regional S3 to the Ocean Mission's objectives.

- 1 Continue improve connections between DG RTD with local research and development/innovation centers** in the Atlantic and Arctic area, to obtain knowledge about territorial initiatives linked to the Ocean Mission. Without studies or territorial research, it is not possible to define the needs of ecological preservation or restoration,

and therefore not possible to involve local companies to develop appropriate solutions.

<b>Implementation detail</b>	DG RTD organizes meetings with Regional S3 groups to learn more about regional strength and priorities when it comes to Blue economy/preservation of the marine ecosystems
<b>Indicator</b>	Number of meetings organized by DG RTD with S3 stakeholders and regional experts

**2 Increase coordination between various DGs in the European Commission (DG MARE, DG RTD, DG REGIO)** to reflect on the interoperability between different funding programmes when it comes to achieving the Ocean Mission objectives. This should enable regions to better accompany their territorial stakeholders to make the most of EU programmes.

<b>Implementation detail</b>	The European Commission integrates a S3 criteria in centrally managed funds to ensure that they can contribute to the implementation of regional S3
<b>Indicator</b>	Number of references to S3 in EU funding legal bases

**3 Support the creation of interregional partnerships between regions** linked to the objectives of the Mission Ocean thanks to the support of the EU Blue S3 Platform. Interregional partnership could cover not only its objectives of “sustainable blue economy” but also “Protect and Restore marine and freshwater ecosystems and biodiversity” as well as “Prevent and eliminate pollution of our ocean”. In particular, it could foresee a Blue S3 call on water management which appears to be among of the most common S3 objectives linked to the Ocean Mission in Atlantic Regions. A pilot on climate adaptation of industries or on sustainable aquaculture, could also fit the Arctic regions' interest, emphasizing sustainable development solutions at technical level for remote areas.

<b>Implementation detail</b>	Replicate brokerage events of the EU Blue S3 Platform
<b>Indicator</b>	Number of new interregional partnerships in the field of the Ocean Mission

<p><b>Case study</b></p>	<p>The Partnership on Circular Smart Aquaculture led by Haut-de-France Region has the ambition to contribute to:</p> <ul style="list-style-type: none"> <li>• Energy transition in the aquaculture sector: introduction of renewable energy sources, more efficient use of energy, less energy-demanding feed resources</li> <li>• More efficient use of water and space: RAS technologies, aquaponics, site optimisation with respect to ecosystem hydrodynamics and biogeochemistry and to other uses of the marine space, monitoring and management tools for precision farming</li> <li>• Fighting scarcity of feed ingredients: resource-efficient novel feeds e.g. SCP, algae, insects, marine invertebrates</li> <li>• Better use of side streams, promoting circular production systems: recovering and utilising by-products from processing plants (fish, shellfish), from RAS/closed systems (sludge, effluents), and exploring business model for IMTA and aquaponics</li> <li>• More targeted and skilled human capacity: training of existing staff and educating new candidates to enable the needed transitions in aquaculture</li> </ul>
--------------------------	---

**4 Develop an accurate monitoring and communication on the Ocean Mission's projects results** at regional level, making known the innovations that are ready to be on the market and could be transferred to other regions.

<p><b>Implementation detail</b></p>	<p>DG RTD organizes meetings with Regional S3 groups to learn more about regional strength and priorities when it comes to Blue economy/preservation of the marine ecosystems and shares innovative solutions identified in Ocean mission's projects</p>
<p><b>Indicator</b></p>	<p>Number of meetings organized by DG RTD with S3 stakeholders and regional experts</p>

**5 Promote the use of EU-wide databases as a great source of technical information on innovation in the field of the Ocean Mission.** The Mission supports this objective through the creation of the Mission Ocean and Waters service portal (also called Mission

Implementation Support Platform, MIP)<sup>7</sup>. This platform aims at keeping track of the Mission's lighthouses activities, at finding financial instruments, and at centralizing best practices, projects outcomes and deliverables. However, data may be spread around reducing the impact of the MIP. For example, BlueMissionAA developed WaveLinks, together with PREP4BLUE, and BlueMissionBanos to collect information on projects, stakeholders, engagement methods, citizen science, funding and policies linked to the Mission Ocean objectives<sup>8</sup>.

<b>Implementation detail</b>	Rationalize the tools and materials produced by the CSA and lighthouses of the Ocean mission
<b>Indicator</b>	Number (or percentage) of duplicated or redundant tools/materials eliminated and successfully consolidated into unified systems or repositories across CSA and Lighthouse hubs

- 6 Support a stronger involvement of EU regional authorities, especially S3 experts in the preparation of Horizon Europe work programme** to favour the harmonisation of R&I funding with the priorities of the regions and better screening of innovative projects, linked to the objectives of Ocean Mission.

<b>Implementation detail</b>	Invite a pool of regional S3 experts to comment on Draft Horizon Europe workprogrammes
------------------------------	--

<sup>7</sup> Mission Implementation Platform access: <https://projects.research-and-innovation.ec.europa.eu/en/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters/horizon-mission-projects>

<sup>8</sup> WaveLinks application access: <https://wavelinks.eu/>

<b>Indicator</b>	<p>Percentage of work programme topics/strategic sessions including S3 experts' participation.</p> <p>Documented evidence of changes to topic framing or evaluation criteria resulting from regional/S3 input.</p>
------------------	--

**7 Support the involvement of regions in “National and Regional Partnership Plans”.** This way, coastal regions could nurture the content of the Partnership Plans and allow a better screening of innovative “Blue” projects in the Atlantic and Arctic, linked to the objectives of Ocean Mission.

<b>Implementation detail</b>	Establish a Formal Role for Regions in the National and Regional Partnership Plans (post 2027 Multi-Annual financial framework)
<b>Indicator</b>	Percentage of Partnership Plans with documented active involvement of (coastal) regions during the planning or design phase.

**8 Improve the conditions for regions to be associated regions to the Mission Ocean-funded project.** Although regional authorities can apply to be associated regions to Mission Ocean-funded Horizon Europe projects to receive grants to pilot solutions linked to Mission Ocean's objectives, the eligibility criteria under the calls for associated regions should be more flexible to provide the opportunity for regions from other sea basins to participate. So far, there is few Atlantic or Arctic Regions which seize this opportunity.

<b>Implementation detail</b>	Raise awareness of Atlantic and Arctic Regions on opportunities to be associated regions to the Mission funded projects and sound them on what could prevent them to join
<b>Indicator</b>	Percentage of Atlantic and Arctic regions involved in Ocean Mission funded projects



CPMR - 2024