



ProtoAtlantic Blue Growth Policy Recommendations Roadmap for Marine Policies

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Innovation in the
Marine Environment

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Appendix 1: University College Cork – ProtoAtlantic Blue Growth Policy Round Table Workshop Report – December 2018

Appendix 2: European Marine Energy Centre – ProtoAtlantic Blue Growth Policy Workshop – February 2019

Appendix 3: Campus Mondial de la Mer – Regional Conference on Higher Education and Research – Contribution of the Marine and Coastal Working Group – Summary of the Priority Scientific Issues – June 2019

Appendix 4: Innovalia Association and EMERGE – WP3 – Round Table: Blue Growth – Policies to support entrepreneurship in the marine sector – June 2019

Appendix 5: INESC TEC – ProtoAtlantic Blue Growth Policy Round Table Workshop Report – November 2019

Executive Summary

Blue Growth Policy Recommendations – Roadmap for Marine Policies

The European Commission's Blue Growth strategy encourages coastal regions to diversify their economy while finding innovative opportunities to sustainably use marine natural resources. The Interreg Atlantic Area especially carries importance with its rich marine resources, both geographically and in terms of management of the resources. Each region within the Interreg Atlantic Area provides unique competences which enable the stimulation of innovation and competitiveness by fostering resource efficiency through providing technical assistance and business support to start-ups and small and medium enterprises (SMEs).

ProtoAtlantic, an Interreg Atlantic Area funded project, aims to develop and validate a model for the prototyping and exploitation of innovative ideas in the maritime sector in the Atlantic Area. To support this model, ProtoAtlantic hosted Blue Growth Policy Round Table Workshops targeting the development of potential regional Blue Growth strategies by inviting local and regional policymakers, business and industry stakeholders, academia, and aspiring local entrepreneurs to discuss the marine potential in all partner regions. The workshops aimed to understand the current state of the available marine resources and infrastructures in each region and to discuss Blue Growth strategies as potential pathways to coastal development. The ProtoAtlantic partner regions include Brest in France, Cork in Ireland, Porto in Portugal, Orkney in Scotland, and the Canaries in Spain.

Across the Atlantic Area region five major common themes emerged to Blue Growth and to design effective strategies to achieve Blue Growth aims. The overarching themes are a categorisation of requirements to ensure sustainable development in the coastal regions. These themes include:

1. Political will needed to overcome economic barriers
2. Building social capacity to meet market demands
3. Pipeline of opportunities for development and investment
4. Nurturing innovation and entrepreneurship
5. Marine cluster creation to increase competitiveness

Recommendations for Blue Growth strategies and the development of marine sectors were based on a European level, a national level, and a regional and local level. The workshops emphasised the need for political leadership in the marine spaces with a long-term vision for regional development, strong industry and research connections, and the need for private and public investment opportunities to foster the marine sectors.

Introduction

The European Commission defined Blue Growth as “an initiative to harness the untapped potential of Europe’s oceans, seas and coasts” which for the first time identified rich marine resources as an unique asset for economic development in coastal regions and on islands. The European Commission has identified the development of five marine sectors which have the highest growth potential, which include aquaculture, marine renewable energy (i.e. offshore wind energy, tidal, and wave energy), seabed mining, marine biotechnology, and coastal tourism. From the European level these Blue Growth strategies have cascaded to the individual national levels where European countries have identified regionally specific marine development strategies in line with the overarching Blue Growth strategies.

Blue Growth carries importance especially within the Interreg Atlantic Area which supports the transnational collaboration and connectivity between five countries: France, Ireland, Portugal, Scotland, and Spain. The Atlantic Area is rich in marine resources, both geographically and in terms of the management of the resources. Each Atlantic Area region provides unique competences which enable the stimulation of innovation and competitiveness by fostering resource efficiency through providing technical assistance and business support to start-ups and small and medium enterprises (SMEs). The management approach to each of these regions requires special attention as the geographic and geopolitical assets vary between the regions. While the European Commission focused on the development of specific sectors with high return, the national Blue Growth strategies need to consider the existing marine competencies already available to implement strategic policy measures for the sustainable development of the coastal regions.

ProtoAtlantic, an Interreg Atlantic Area funded project, targets these regional differences and marine competences and supports the sustainable development in coastal regions. ProtoAtlantic provides marine-specific support mechanisms to start-ups and SMEs, including business support through the accelerator and mentorship programmes, enabling companies to fast-track their product development through access to prototyping and testing facilities in all partner regions. ProtoAtlantic also aims to provide policymakers with high-level policy recommendation to foster Blue Growth.

To achieve this objective, the ProtoAtlantic consortium has held Blue Growth round table in each of the Interreg Atlantic Area partner regions. The workshops aimed to 1. gain a deeper understanding of the enablers and constraints of the regional development in each region; 2. to envision potential regional Blue Growth strategies. The outcomes of the regional workshops are presented in this document and can be used as a resource for Blue Growth policy recommendations.

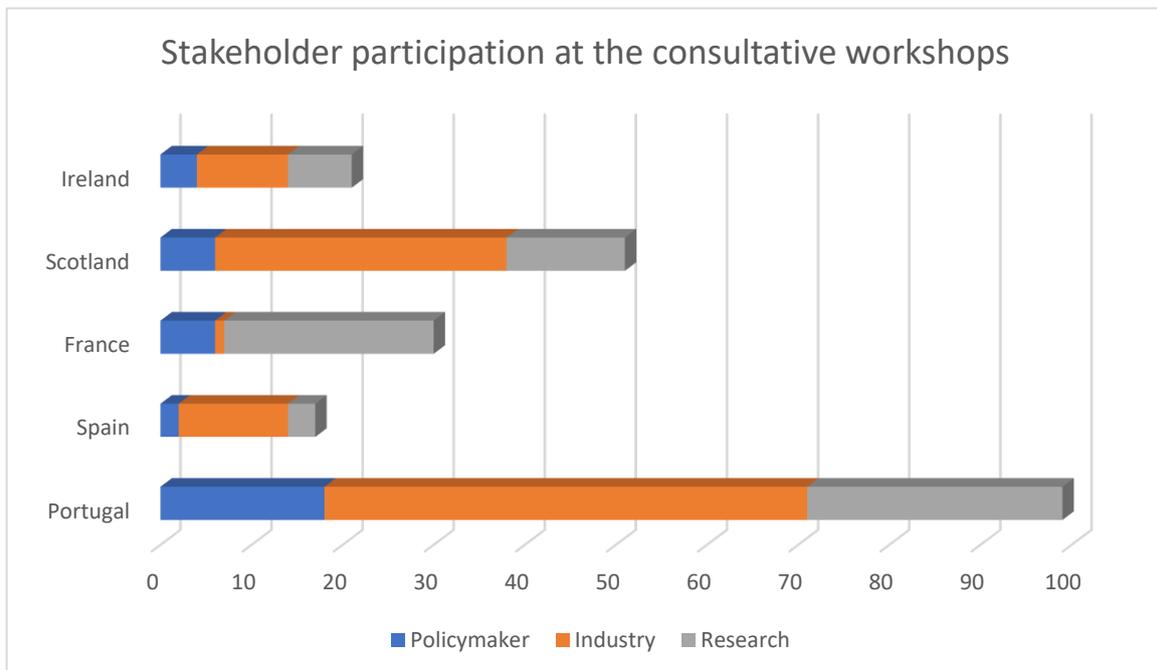
The Interreg Atlantic Area refers to the partner regions as supra national regions encompassing all partner regions (i.e. France, Ireland, Portugal, Scotland and Spain). Within the context of this document, national approaches refer to the countries individually, regional and local approaches refer to the specific geographic regions and cities in which the partner organisations are seated (i.e. Brest, Cork, Oporto, Orkney, and the Canaries).

Workshop Methodology

5 interactive consultative workshops were held in the partner regions between December 2018 and November 2019. The first consultative workshop was held in December 2018 in Cork, Ireland, subsequent workshops were held in Edinburgh, Scotland in February 2019, in Brest, France in June 2019, in Santa Cruz de Tenerife, Spain in June 2019, and in Porto, Portugal in November 2019. All workshops followed a similar template which was designed and tested at the University College Cork.

The aim of the workshops was twofold, 1. to understand the enablers and constraints for the regional development in the Interreg Atlantic Area as experienced by marine stakeholders; 2. to envision potential regional Blue Growth strategies for the Interreg Atlantic Area. To achieve this the half-day workshops used two methodologies: 1. The PESTLE-method to understand the Political, Economic and Business, Social, Technological, Legal, and Environmental mechanisms in each partner region nurturing and/or curtailing the development of marine sectors, 2. The SWOT analysis to determine Strengths, Weaknesses, Opportunities, and Threats of potential marine development strategies as identified by the stakeholders.

The outcomes of the regional workshops differed greatly, in part depending on the stakeholder participation, the geopolitical context, the state of development of the marine sectors, and the currently implemented marine policies. All regional workshop reports can be found in the Appendix. Stakeholder participation varied across regions with most attendees representing industry and research/academia.



High-level Findings

While the regions share many commonalities in existing infrastructures and support mechanisms available for Blue Growth as evident in the regional workshop reports, i.e. all regions provide business support and advice for start-ups and SMEs, regional differences and priorities are also crystallising. For example, some regions seem to actively encourage research and development from academic institutions to drive innovation, while other regions encourage industry to foster innovation. This showcases that Blue Growth strategies are regional specific albeit with overarching aims of achieving sustainable development in coastal regions focusing on the effective and efficient harvesting of marine resources.

Across the partner regions four major common themes emerged which the stakeholders felt are necessary to examine to design effective strategies to nurture Blue Growth, which were informed by the regional workshop reports and can be found in the Appendix. The overarching themes include:

1. Political will needed to overcome economic barriers
2. Building social capacity to meet market demands
3. Pipeline of opportunities for development and investment
4. Nurturing innovation and entrepreneurship
5. Marine cluster creation to increase competitiveness

The stakeholders have highlighted that these themes need to be addressed at the national level, while effects may take place at the regional and local level. One key message that has emerged from the analysis of all workshop reports is the importance of Blue Growth strategies to incentivise strong collaboration efforts between the government, industry, and academia to ensure economic development in marine sectors.

High-level Findings

1. Political will needed to overcome economic barriers

Across all regions stakeholders identified that policymakers have an opportunity to take leadership in the development of marine sectors. Long-term vision and strategies can aid in the development of marine sectors in coastal regions, stakeholders in all regions observed. The stakeholders identified two main issues regarding Blue Growth and the political will: 1. A need for a decision-making process considering the need to translate economic development strategies from a national level to regional and subsequently to local levels; 2. The decision-making process needs to be informed by the regional baseline environmental marine conditions to effectively support marine sectors.

1.1. Translating national development strategies

Stakeholders across all regions noticed a lack of transcendence from national policies into regional and local development strategies specific to regional marine capabilities and capacities. Irish stakeholders found that the national policies represent opportunities for Blue Growth development, yet there is a need to translate the policies into concrete regional development strategies. Scottish stakeholders highlighted that the Scottish government is generally supportive of the development of marine renewable energy (MRE) especially in offshore wind energy. Yet, other MRE technologies such as tidal and wave energy are not supported in the same way which poses significant economic barriers for these emerging sectors as industry needs in these sectors are not being met. Spanish stakeholders have strongly supported a 'Sea Regional Council' that would specifically address the challenges and opportunities related to the marine industries and sector development in the Canaries. Spanish stakeholders also recognised a disconnect between the government and industry caused by policymakers setting objectives with limited collaboration from industry partners which a dedicated council to the marine sectors and development of these could address more easily than centralised policymakers.

1.2. Understanding environmental conditions to support marine sectors

The stakeholders observed that the decision-making process needs to consider the state of the existing marine resources and the access to the resources to effectively and efficiently support the development of marine sectors and to meet industry needs. A regional analysis of the available infrastructure currently used for the exploitation of marine resources and improvement measures to increase efficiency, eliminate redundancy, and nurture innovation in production processes and services to develop marine sectors was observed as necessary by the stakeholders across all regions. In the Irish context, stakeholders highlighted the anticipation of emerging marine sectors and the need to research baseline environmental conditions to determine which marine activities are sustainable and efficient for the region. French stakeholders also highlighted that investment in environmental research could strengthen the collaboration efforts between industry and research thereby encouraging innovative solutions to overcome challenges experienced by industry and addressing global environmental issues.

High-level Findings

2. Building social capacity to meet market demands

The stakeholders across all regions identified the need for capacity building especially in providing education and training opportunities in the marine sectors. Additionally, stakeholders observed a necessity to building strong community bonds between the marine ecosystem, marine activities, and the community which may help in attracting interest from the public to seek marine-related employment opportunities. Irish stakeholders observed an opportunity to develop the marina for public marine-related activities and projects such as a harbour boardwalk or aquariums highlighting the national marine wildlife and marine heritage. At the same time, across all regions stakeholders noticed an unmet workforce demand in the marine sectors. This imbalance between workforce demands and industry needs represents an opportunity for coastal regions to meet market demands by pursuing stronger collaboration between academia and industry.

2.1. Education and training opportunities

Across all regions a lack of training opportunities was observed as a key issue in sustaining a local workforce in marine sectors. French stakeholders stated that enabling conditions for academic and industry collaboration to facilitate industry-focused training would encourage an inclusive approach to economic and societal challenges. Irish stakeholders noted that providing industries with a highly-skilled and competitive workforce would create regional employment opportunities and encourage industries to engage with academia, research institutes, and universities to create an industry-specific curriculum that ensures a match between the available employment opportunities and the needed skills. Portuguese stakeholders recognised the availability of highly skilled workforce in ICT based in the region as a competitive asset. Strategies targeting knowledge transfer across sectors, including from non-marine-related sectors to and from marine-related sectors, could benefit the regional development by nurturing an indigenous marine sector built on already existing regional competitive assets.

2.2. Employment opportunities

Employment opportunities for skilled workforce in marine sectors was highlighted as a major concern by the stakeholders. Irish stakeholders identified that workforce returning from the sea has difficulties finding employment opportunities in their field of expertise, leading to brain drain i.e. highly skilled workforce moving outward of the region and in many cases also outside of the marine sectors. Similarly, Portuguese stakeholders stated that creating employment opportunities in coastal regions related to the marine sectors as a vital issue to maintaining a highly skilled workforce in the region. In the Scottish context, an opportunity was recognised to incentivise workforce to return to coastal regions by building a supply chain favouring local content. Stakeholders identified a need to create regional employment opportunities for the local and regional workforce by creating investment opportunities for industry in the coastal regions.

High-level Findings

3. Pipeline of opportunities for development and investment

Across all regions, it can be noted that there was overall enthusiasm for Blue Growth development, yet stakeholders highlighted a need for planning strategies targeting a ‘pipeline of opportunities’ to incentivise long-term investment strategies from private and public funding. Irish, Portuguese, and Scottish stakeholders pointed out challenges associated with the licensing of marine spaces and the uses thereof. Portuguese stakeholders also identified a lack of critical mass in marine industries caused by the fragmentation of some of the marine sectors. French stakeholders highlighted that competition from other coastal regions with strong marine and maritime capacities dilute investment opportunities for industry. In the Irish context, it was noted that de-risking marine development projects could further incentivise investment from private funding. Scottish stakeholders observed that integrating multiple marine sectors such as aquaculture with marine renewable energy may provide more private investment opportunities as this would speak to a broader range of marine stakeholders. The overarching regional marine development challenges discussed in terms of funding and investment opportunities for public and private investors span across all regions, similarly it was noted that marine-related start-ups and SMEs face additional hardships.

3.1. Marine specific support mechanisms

Stakeholders across all regions observed that regional and local economic development agencies provide ample programmes for business and development support and accelerator programmes among other support mechanisms for start-ups and SMEs. However, a lack of available public and private funding specific to marine-related start-ups and SMEs and the scaling up of these ventures was identified as a major economic barrier across all regions. Stakeholders noted that the challenges experienced by start-ups and SMEs in the marine sectors differ from land-based activities and therefore require different types of support mechanisms. In the Irish context, it was recognised that there is room for improvement for enterprise development tailored specifically to Blue Growth. Portuguese stakeholders recognised the lack of access to venture capital for start-ups and new business ventures. Spanish stakeholders identified a need to streamline the bureaucratic process to obtaining funding support for start-ups and SMEs. The Society for Economic Development of Canary (SODECAN) based in Spain targets specific gaps in the market where start-ups and SMEs find it particularly difficult to obtain private funding, providing these ventures with funding opportunities. Initiatives such as this, aimed specifically at marine ventures, would minimise the competition faced from land-based ventures where funding may be more readily available.

High-level Findings

4. Nurturing innovation and entrepreneurship

The need for innovation has been a reoccurring theme, as the challenge experienced across all regions, is to create a nurturing environment for innovation and entrepreneurship. Across the regions, a need to encourage entrepreneurship to achieve Blue Growth strategies was discussed. The stakeholders highlighted a need to foster an environment that encourages and supports entrepreneurial ventures with engaging business support mechanisms such as matchmaking between large-scale industries, mentorship programmes, business advice, among others. Spanish stakeholders highlighted that regional policymakers, such as the proposed Sea Regional Council, could also strengthen principles of innovation and entrepreneurship policies as part of local development strategies, thereby ensuring the nurturing of local start-ups and SMEs to overcome economic barriers, which was also identified as key issue in the Canaries.

4.1. Access to testing and prototyping marine technologies

The technical support infrastructure for start-ups and SMEs to prototype and test has been noted of high importance across all regions. The importance of programmes, such as ProtoAtlantic which enable the fast-tracking of technologies, are of high importance to support the start-up and SME community. French stakeholders noticed that the available sea-trial facilities accelerate the development of new technologies in marine sectors. An opportunity to further develop the technical capabilities and capacities in the existing marine testing facilities for marine renewable energy was recognised by Irish and Portuguese stakeholders.

5. Cluster creation to increase competitiveness

When discussing overall Blue Growth strategies, stakeholders observed that start-ups and SMEs could benefit from cluster initiatives which may also help gain competitive advantages and help unite fragmented marine sectors. Creating marine clusters, it was identified, could help local industries to compete in an international market, as observed in the wave and tidal cluster and the companies related to the industry in Orkney. In the Irish and Spanish contexts, marine-specific were discussed as opportunities for regional development and to ensure that regions are competitive. Irish stakeholders observed that incubation centres could positively contribute to creating a critical mass of marine-related industries in the region to unite fragmented marine sectors. French stakeholder also observed that the cluster development would enable easier access to cross-cutting collaborations between academia and industry and would enable knowledge transfer between non-marine related fields in the marine sector development.

Recommended Actions

The ProtoAtlantic Blue Growth policy round table workshops which were held between December 2018 and November 2019 in France, Ireland, Portugal, Scotland, and Spain highlight the vast potential of Blue Growth strategies and the marine sector development in the Interreg Atlantic Area. Each region represents interesting opportunities and challenges. Most notably, the workshops emphasised the need for political leadership in the marine spaces with a long-term vision for regional development, strong industry and research connections, and the need for private and public investment opportunities to foster the marine sectors. Recommended actions are given below addressing the European, the national, and regional/local levels to effectively support the creation and implementation of Blue Growth strategies aimed to sustainably develop coastal regions and marine sectors.

European Level

- Blue Growth strategies for the sustainable development of coastal regions and marine sectors need to be prioritised on an EU level realising the competitive advantage that coastal regions provide in terms of providing food and nutrition, renewable energy, competitive advantages on global markets, and employment opportunities

National Level

- The regulatory framework for marine spatial planning and licensing of marine areas needs to be available for existing and future marine activities
- Development of marine sectors needs to build on long-term Blue Growth strategies that ensure continuous investment opportunities in marine sectors, for example through a pipeline of marine development projects thereby providing employment opportunities in the coastal regions
- Strong focus on innovation and entrepreneurship policies and cluster development to help foster the development of coastal regions including a cross-cutting approach that ensures collaboration between all stakeholders and across sectors

Recommended Actions

Regional and Local Level

- Blue Growth strategies need continuous assessment and reassessment which should be ensured through top-down and bottom-up approaches through stakeholder meetings
- Blue Growth strategies should aim to effectively and efficiently utilise marine resources based on a firm understanding of existing and potential avenues of marine sector development, continuous monitoring of marine resources to ensure marine activities enhance or in the least not degrade marine resources
- Creating strong bonds between the public and marine activities through public outreach programmes, i.e. developing marine spaces for leisure activities and educational purposes
- Training and education in marine-related fields with a strong industry-lead should be prioritised to ensure an industry-ready workforce
- Provide business support mechanisms specifically for marine related start-ups to nurture innovation and entrepreneurship
- Enable technical support infrastructure for prototyping and testing of marine technologies to fast-track technologies and the start-up and SME community
- Marine-specific cluster creation to increase regional competitiveness and eliminate marine sector fragmentation

Lead Partner



Main Partners



Associated Partners

