

The alignment of the regulatory framework for the growth of the Blue Bioeconomy in the Baltic Sea region

Position paper

by Blue Platform consortium, March 2022

The Blue Bioeconomy is expected to produce protein, raw materials, valuable chemical compounds, biomass, paired with significant job creation. Its development can take place gradually or by exponential growth, going hand in hand with the enhancement of employment and prosperity of coastal communities. With the use of novel technologies, the Blue Bioeconomy should attract young people as workforce, thus ensuring future for the sector. At the same time sustainability and the quality of marine resources utilised are of utmost importance for the success of the sector. Fairly many examples have been provided on the negative impact of economic activities upon the marine environment. Therefore environmental law limits quite often the development of business based on the use of marine resources. On the other hand, maritime spatial planning is expected to solve a variety of challenges, when using the ecosystem-based approach in partitioning the marine space. Therefore, the question of licensing and criteria on issuing the permits for activities in the sea has appeared in the spotlight.

This paper contains

- 1) an overview and partly review of policy documents, conventions and legal texts on different levels which are related to the environmental criteria relevant to the Blue Bioeconomy as well as the state of the art in the national contexts;**
- 2) an identification of next steps for the Blue Bioeconomy stakeholders in the Baltic Sea region to enhance the development of the sector.**

Overview of legislative acts and policy documents

International level

On the overarching international, strategic level, the Sustainable Development Goals (SDGs) form the core of the United Nations (UN) 2030 Agenda for Sustainable Development adopted by all UN Member States in 2015. For the world's oceans and seas SDG 14 "Life below water", with its goal "Conserve and sustainably use the oceans, seas and marine resources" is the most relevant. In relation to SDG 14 the United Nations proclaimed the UN Decade of Ocean

Science for Sustainable Development for 2021 to 2030 (Ocean Decade). The Ocean Decade recognises that the science-informed mitigation and adaptation policies to global change are urgently needed, but neither science nor policymakers can accomplish that alone. As such, the Ocean Decade bolsters inclusive approaches of designing and conducting scientific marine research, which also supports the development of a sustainable Blue Economy.¹

It should be noted that international law stands above the EU and national law. The United Nations Convention on the Law of the Sea (UNCLOS)² lays down since 1982 a comprehensive regime of law and order in the world's oceans and seas, establishing concepts and rules governing all uses of the oceans and its resources.³ The regime includes a number of global agreements on specific issues and regional agreements aiming at the protection and development of regional seas. It also indicates that the marine governance is primarily the responsibility of national authorities.

The UN Food and Agricultural Organisation's (FAO) Code of Conduct for Responsible Fisheries⁴ includes the environmental principles for the development of aquaculture. However, to date there are no aquaculture-related binding international agreements. A variety of voluntary instruments have been established within the framework of the Code to assist fishers, industry, and governments in taking the necessary practical steps to implement the various facets of the Code. A "Strategy and Outline Plan for Improving Information on Status and Trends of Aquaculture" (Strategy)⁵ is one of these instruments. The Strategy aims to provide a framework and a plan for the improvement of knowledge on aquaculture as a basis for policymaking and management. It proposes to significantly improve data collection and related research. The FAO Technical Guidelines on Aquaculture Certification⁶ are an additional tool for the sector. These guidelines provide direction for the development, organisation, and implementation of credible aquaculture certification schemes towards orderly and sustainable development of the sector.

The international legal framework indicates the need of sustainable marine use and provides principles to follow. The use of marine sites is the responsibility of national authorities.

European Union level

On European Union (EU) level the leading strategy in the field of the Blue Bioeconomy is the **approach for Sustainable Blue Economy (SBE)**, a 2021 update of the Blue Growth Strategy (BGS), established in 2012.⁷ The Communication of the SBE is a long-term strategy to support the sustainable growth in the marine and maritime sectors. It emphasises the role of the seas and the ocean as the drivers for the future European economy, including the potential for innovation and growth. It is also a maritime contribution to the European Green Deal and the Recovery Plan for Europe. It complements other framework initiatives adopted or planned by the European Union and identifies concrete transformation processes in the different sectors

¹ https://www.banoscsa.org/files/7273/Banos_2021_SRIA_web_FINAL.pdf

² United Nations Convention on the Law of the Sea (UNCLOS), Montego Bay, 1982

³ https://www.un.org/depts/los/convention_agreements/convention_overview_convention.htm

⁴ <https://www.fao.org/fishery/en/code/en>

⁵ <https://www.fao.org/3/i0445t/i0445t00.pdf>

⁶ <https://www.fao.org/publications/card/en/c/f6d747f5-8068-5dd9-bf03-d08f9223fff3/>

⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:240:FIN>

of the Blue Economy. The approach aims to provide coherence across the Blue Economy sectors, to facilitate their coexistence and to look for synergies in the use of maritime space without damaging the environment, being therefore a quite novel approach on EU level.

The **European Green Deal** (2020) is also a cross-sectoral policy aiming to make the EU's economy sustainable by turning climate and environmental challenges into opportunities. The policy is targeted towards everyone, from policymakers to industry and citizens with an emphasis on joint action to achieve the goals.⁸ A **Farm to Fork Strategy**⁹ is at the heart of the EU Green Deal aiming to make food systems fair, healthy and environmentally friendly.

The **Integrated Maritime Policy** (IMP) and **Common Fisheries Policy** (CFP) are the previously adopted EU policy frameworks with links to the Blue Bioeconomy, containing common goals regarding Blue Growth and sustainability. The CFP sets rules for sustainable fishing and conservation of fish stocks. It also includes the aquaculture policy. The adopted **Strategic guidelines for the sustainable development of EU aquaculture** (2013, 2021)¹⁰ are a tool of the CFP and served first as the basis for the development of national strategic plans for aquaculture, for the period 2014-2020.¹¹ In accordance with suggestions of the strategic guidelines, the plans included simplification of administrative procedures, mostly regarding permit application procedures. With the guidelines updated in 2021, Member States are invited further improve the national plans and intensify the support to sustainable aquaculture through their national programmes of the European Maritime Fisheries and Aquaculture Fund (EMFAF) for 2021-2027.

The Strategic guidelines identify the challenges and obstacles for aquaculture growth in EU due to complex and not harmonised legislation and propose solutions for Member States to overcome these. The suggested solutions include **simplification of procedures** in several ways:

- *streamlining – and harmonising where possible – legislation and administrative guidance on aquaculture, in an ideal case to have a national regulatory act for all aquaculture aspects, including procedures and timeframes on applications for new licenses or license renewals.*
- *creating a separate national authority to facilitate and coordinate the work of those authorities responsible for planning, licensing and monitoring of aquaculture activities. Involvement of relevant stakeholders is also foreseen in this entity.*
- *a 'one-stop-shop' system for aquaculture licenses, to facilitate transparency on the licensing process and interaction between the applicant and authorities.*
- *have longer-term licensing, with regular monitoring and sanctions for non-compliance, including license revocation. Licensing terms should then include an obligation to monitor and report data, required under the relevant national and EU legislation.*

The Strategic guidelines also stress the importance of coordinated spatial planning principles and list a scope of topics the planning has to consider:

⁸ https://www.banoscsa.org/files/7273/Banos_2021_SRIA_web_FINAL.pdf

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0381>

¹⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:236:FIN>

¹¹ https://ec.europa.eu/oceans-and-fisheries/ocean/blue-economy/aquaculture/aquaculture-multiannual-national-plans_en

- the development of offshore aquaculture, where possible;
- the development of aquaculture with a lower environmental impact – IMTA;
- the integration of suitable aquaculture activities into protected areas, e.g. Natura2000;
- special areas for organic aquaculture;
- the adaptation of aquaculture to climate change and mitigation of climate change impacts (e.g. carbon capture).

The planning authorities are also encouraged to seek for synergies and multi-use of space, e.g., combining offshore wind parks and aquaculture.

On the level of binding **EU legislation**, the Blue Bioeconomy is mostly governed by **environmental directives**. Aquaculture, as the most pronounced sector of marine Blue Bioeconomy is regulated at least by the following: the Water Framework Directive (Directive 2000/60/EC); the Marine Strategy Framework Directive (Directive 2008/56/EC); the Birds and Habitats Directives (Directive 2009/147/EC and Directive 92/43/EEC); the Industrial Emissions Directive (Directive 2010/75/EU); the Regulation concerning the use of alien and locally absent species in aquaculture (Regulation (EC) No 708/2007) and the Regulation on invasive species (Regulation (EU) 1143/2014); the Environmental Assessment Directive (Directive 2011/92/EU); the Strategic Impact Assessment Directive (Directive 2001/42/EC).

Considering the number of directives and the responsibility of national authorities to implement them, it is not surprising that several studies are focussing on a conflict between the expected growth of the sector and the achievement of good ecological status, directly related to the sites chosen for aquaculture. All EU Member States need to follow the requirements of the WFD on obtaining good ecological status as well as of a ruling of the Court of Justice of the European Union (2015) on avoiding deterioration of water quality even by one indicator and by one status class. This ruling, known also as the Weser case, limits the Member States' discretion in achieving the objectives of the directive, making the attainment of a good status binding not only as an overall objective, but applicable in individual projects affecting a water body. Consequently, national authorities may not allow activities that deteriorate the environmental quality of a water body or jeopardise the achievement of a good status on an individual project level.¹²

Maritime spatial planning – as foreseen in Maritime Spatial Planning Directive 2014/89/EU - organised with inclusion of representatives of the sector in the design process, has been regarded as one of approaches to target the conflicts. Still, an easy and smooth way of solution is not to be expected here. The governance of aquaculture is still seen as lagging other sectors which use the shared environmental resources like water and space. Although known and practiced globally since many centuries, aquaculture still has less a lower level of property rights, established state policies, legislation, farmer cooperatives, supply chains or co-management arrangements.¹³

While providing the policy framework and guidelines on the development of the Blue Bioeconomy, the European regulatory framework is complex and not harmonised. Implementation and legal responsibility lie on a national level.

¹² doi:10.1163/18760104-18030005

¹³ DOI: 10.1111/raq.12622

Regional and national level

On a **regional** strategic level for the Baltic Sea, the **European Union Strategy for the Baltic Sea Region** (EUSBSR) is the first Macro-regional Strategy in Europe. The Strategy has three objectives, which represent the three key challenges of the Strategy: saving the sea, connecting the region, and increasing prosperity. The revised EUSBSR Action Plan (2021) states that climate change aspects are to be mainstreamed into all 14 Policy Areas.¹⁴ The Policy Area Bioeconomy specifically supports spreading of new sustainable practices and productions in agriculture, forestry, blue bioeconomy including fisheries and aquaculture in the Baltic Sea region.

The **Convention on the Protection of the Marine Environment of the Baltic Sea Area – Helsinki Convention** - seeks to protect the Baltic Sea from all sources of pollution from land, air and sea, as well as to preserve biological diversity and to promote the sustainable use of marine resources. The respective Baltic Marine Environment Protection Commission (HELCOM) works through topical groups with underlying network of expert groups.¹⁵

HELCOM has developed the Recommendation 37/3 on sustainable aquaculture¹⁶ which will be implemented by a working group (CG Aquaculture). The group must develop set of Best Available Technology (BAT) and Best Environmental Practices (BEP) descriptions¹⁷ considering the heterogeneous nature of aquaculture, variability in technology and geography. These descriptions should be relevant for both existing and new, sea-based and land-based aquaculture with a potential impact on the Baltic Sea.¹⁸ Still, the work is on-going. Moreover, the set of descriptions will not have mandatory character.

On the **national** level the first step of legal support for further development of the Blue Bioeconomy is to have space allocated in the Maritime Spatial Plan (MSP) for Blue Bioeconomy activities. In the Baltic Sea region sites for Blue Bioeconomy are foreseen in maritime spatial plans or their drafts of all EU countries, while the level of specification is different (Tab.1).

Table 1. Types of areas for Blue Bioeconomy sites in MSPs of the EU countries

	Denmark	Estonia	Finland	Germany	Latvia	Lithuania	Poland	Sweden
Specifically allocated area	X							
Priority area			X					
Area of general use		X		(X)	X	X		(X)

¹⁴ <https://www.balticsea-region-strategy.eu/action-plan>

¹⁵ <https://helcom.fi/about-us/convention/>

¹⁶ <https://helcom.fi/media/recommendations/Rec-37-3.pdf>

¹⁷ <https://helcom.fi/helcom-at-work/groups/fish-group/cg-aquaculture/>

¹⁸ <https://portal.helcom.fi/meetings/CG%20AQUACULTURE%204-2021-912/MeetingDocuments/Outcome%20CG%20AQUACULTURE%204-2021.pdf>

Multi-use		X		X			X	
Territorial waters	X	X	X		X	X		X
EEZ	X	X	X	X	X	X	X	X

Source: project "BlueBioSites", State-of-art report, 2021

Besides the marine fish aquaculture already reviewed in position paper on "Legislation of Aquaculture - Status and Perspectives in the Baltic Sea and Nordic countries"¹⁹, the Blue Bioeconomy sectors related to specific sites in the Baltic Sea include cultivation of mussels, seaweed and algae, collection of beach cast and exploitation of artificially constructed substrate plots or floating islands. **Still, despite the presence of Blue Growth agenda for almost a decade, the regulatory framework for Blue Bioeconomy activities in the Member States is still quite loose and unclear or difficult to follow.** The legal procedures are far from being aligned and well-defined. This is the case even in Denmark, which can be considered a pioneer country regarding the Blue Bioeconomy in the Baltic region. The introduction of nitrogen, phosphorous and carbon credits in Denmark also call for a completely new approach from regulatory bodies. Private companies are ready to buy the credits, but it is not yet clear who will have the right to sell credits based on cultivation in the sea²⁰.

The case of Denmark: Marine aquaculture in Denmark is foreseen in specific areas of the Danish MSP and new areas are allocated for mussel production and the farming of mussels and oysters in the water column. The MSP does not plan for seaweed production, as this is a relatively new activity in Denmark and is still being developed. Seaweed production can therefore in principle take place throughout the sea area (except in the shipping corridors), but restrictions may follow from other legislation or if a license is sought for seaweed production in a zone that is allocated for other purposes.

Actions for Baltic Blue Economy stakeholders

Thus, although international and EU policies call for the growth of the Blue Bioeconomy, provide guidelines for simplification of procedures and suggest fast track licensing and adjusted spatial planning, the national regulatory systems of the Baltic Sea region mostly do not provide support for its development. The reasons could be the overall complexity of EU's environmental legislation, wide range of interpretations and lack of capacity to apply regulations, as well as missing awareness on the necessity to use options of marine aquaculture as tools for mitigating climate change and reduce eutrophication of the Baltic Sea. The minor role that the Blue Bioeconomy is currently playing in the Baltic Sea area is also a relevant factor. Therefore, our **recommendations** include practical steps **for Blue Bioeconomy stakeholders**:

¹⁹ https://www.submariner-network.eu/images/20200525_SUBM_Position_Paper_Baltic_Aquaculture_Legislation.pdf

²⁰ <https://www.bioguldborgsund.dk/media/r14jxq04/dk-roadmap-regulation-reestablishing-eel-grass-blue-platorm-danish.pdf>

* Considering the “economic” part of the Blue Bioeconomy, **it is important to strengthen the Baltic representation by applying for membership in relevant sectoral associations and clusters which are advising or consulting EU and national authorities:**

The Aquaculture Advisory Council is an EU body created for provision of advice to the EC and Member States on any new legislative, regulatory or legal measure at European or national level that affects aquaculture.²¹ The Council represents the full scope of aquaculture stakeholders - sectoral organisations and interest groups related to aquaculture.

*The Federation of European Aquaculture Producers*²² represents production companies and serves as an advisory body, providing positions, documentation, and data on European aquaculture issues to the European Commission, the European Parliament and other relevant stakeholders, both at the European and global levels.

EFARO - the European Fisheries and Aquaculture Research Organisation, is an association composed of the Directors of the main European Research Institutes involved in Fisheries and Aquaculture research. EFARO works to achieve greater cohesion and coordination of Community fisheries Research and Development, provide knowledge and advice for fisheries and aquaculture.

European Aquaculture Society - stimulates engagement of all involved or interested in marine and freshwater aquaculture and promotes sponsorship of multi-disciplinary research concerning aquaculture.

Seaweed for Europe - a European coalition that seeks to accelerate and scale the European seaweed industry by driving innovation and investment.

* Use extensively ‘soft measures’ like **Communities of Practice**²³ with involvement of national authorities, decoupling policy and practical solutions, focusing on practical challenges, gaining experience, as well as developing working relationships to learn about the Blue Bioeconomy.

* **Create additional clusters or associations**, where appropriate, for education, awareness raising and lobbying.

* **Raise knowledge on the benefits of the Blue Bioeconomy for national policy development:** promote sustainable Blue Bioeconomy practices that can help to combat climate change, produce protein efficiently and multi-use the marine space.

* **Develop clear and coordinated national guidelines for newcomers** in the Blue Bioeconomy sector.

²¹ <https://aac-europe.org/en/about-us>

²² <https://feap.info>

²³ <https://doi.org/10.1016/j.marpol.2020.104371>