



**Stakeholder Seminar on Blue Economy**

**“Towards a Common Maritime Agenda for the Black Sea”**

**19 March 2019 in Istanbul**

*Concept paper*

**Workshop 5**

**Sustainable fisheries and aquaculture**



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*Concept paper*

**Workshop 5**

**Sustainable fisheries and aquaculture**

**Chapter 1**

**Introduction**

This Stakeholder Seminar stems from the 2018 Burgas Ministerial Declaration<sup>1</sup>, where the participating countries<sup>2</sup> committed to work on the setting up of a Common Maritime Agenda for the Black Sea in 2019. The Burgas Declaration lists the possible cooperation areas to be further developed under the Common Maritime Agenda. The purpose of the seminar is to gather input from the stakeholders in the region in the shaping of the Maritime Agenda.

The seminar is being organised by the Facility for Blue Growth project in cooperation with the European Commission and with the support of the Permanent International Secretariat of the Organisation of the Black Sea Economic Cooperation (BSEC PERMIS).

Experts for the region and beyond will share their vision and experience in developing actions and projects in the Black Sea, with a focus on six blue economy thematic areas. These areas in line with the priorities listed in the Burgas Ministerial Declaration and will be discussed during six parallel workshops. The workshop sessions will be highly interactive and will be flanked by a plenary opening session and a closing discussion. Workshops topics:

- ▶ 1) Research and Innovation
- ▶ 2) Connectivity
- ▶ 3) Tourism
- ▶ 4) Sustainability
- ▶ 5) Fisheries and Aquaculture
- ▶ 6) Blue Skills and Careers

The purpose of this paper is to help guide the discussions during the seminar. The next chapter (2) will provide a brief overview of the blue economy in the Black Sea. The final chapter (3) will present the gap analysis and list of indicative questions to be discussed by the participants during the workshop sessions.

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<sup>1</sup> [https://ec.europa.eu/maritimeaffairs/.../sites/.../burgas-ministerial-declaration\\_en.pdf](https://ec.europa.eu/maritimeaffairs/.../sites/.../burgas-ministerial-declaration_en.pdf)

<sup>2</sup> Bulgaria, Georgia, Republic of Moldova, Romania, Russia, Turkey, Ukraine.

## Chapter 2

### Background: challenges and opportunities for blue growth in the Black Sea

The blue economy includes all economic activities related to oceans, seas and coasts<sup>3</sup>. It is an essential contributor to the national economic growth and job creation. The competitiveness and sustainability of the blue economy depend on the ability of the stakeholders to embrace and support innovation. Thus, the established activities<sup>4</sup> need to be adapted to the current market demands and the environmental standards. At the same time the emerging sectors, which have significant growth potential, need to be supported.

The Facility for Blue Growth in the Black Sea (Facility) has analysed the state of the blue economy in the Black Sea sea-basin through a desk review of available secondary sources<sup>5</sup>. This analysis<sup>6</sup> has been discussed, expanded upon, and validated through a series of workshops held with stakeholders across the Black Sea coastal countries, as reported on the Facility website<sup>7</sup>.

The outcomes of the national workshops<sup>8</sup> confirmed that there is a significant potential for more and more sustainable blue growth and jobs through in the Black Sea. For example, only in Romania and Bulgaria combined the gross added value (GVA) of the blue economy in 2016 was EUR 2 billion. This resulted in about 200,000 jobs in those countries<sup>9</sup>. These figures could well increase in the future if the development of the blue economy is further promoted politically and supported with adequate public and private funding and investment<sup>10</sup>.

The performance in GVA and jobs creation strongly varies across the various maritime economic activities. Striking differences emerge when comparing activities among countries with respect to the: i) current levels of GVA and job generation (activities such as tourism, fisheries, and shipping are the most relevant today), as well as ii) expected improvements of

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<sup>3</sup> A recent definition by the European Commission ([The 2018 annual economic report on the EU blue economy](#)) divides the sectors in the blue economy into: *i) marine-based activities*, that are directly undertaken over or under the oceans, seas and coastal areas (e.g. capture fisheries, aquaculture, offshore oil and gas, offshore wind energy, ocean energy, desalination, shipping and marine transport, marine and coastal tourism), and *ii) marine-related activities*, that use or produce material products and services related to the oceans and seas (e.g. seafood processing, marine biotechnology, shipbuilding and repair, port activities, communication, equipment, marine insurance and marine surveillance). The blue economy also includes those parts of the public sector with direct coastal and ocean responsibilities (national defence, coast guard, marine environmental protection, etc.) as well as marine education, research and observation.

<sup>4</sup> for instance, fisheries, maritime transport maritime and coastal tourism

<sup>5</sup> Based on a targeted analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT) of the maritime sectors and marine and coastal capital at national and regional level (national administrations, regional studies in particular the scoping mission in support to [the development of Blue Economy and Integrated Maritime Policy in the Black Sea](#)).

<sup>6</sup> [Regional assessment of the Blue Economy](#)

<sup>7</sup> <https://blackseablueeconomy.eu/publication-categories/deliverables>

<sup>8</sup> <https://blackseablueeconomy.eu/our-events>

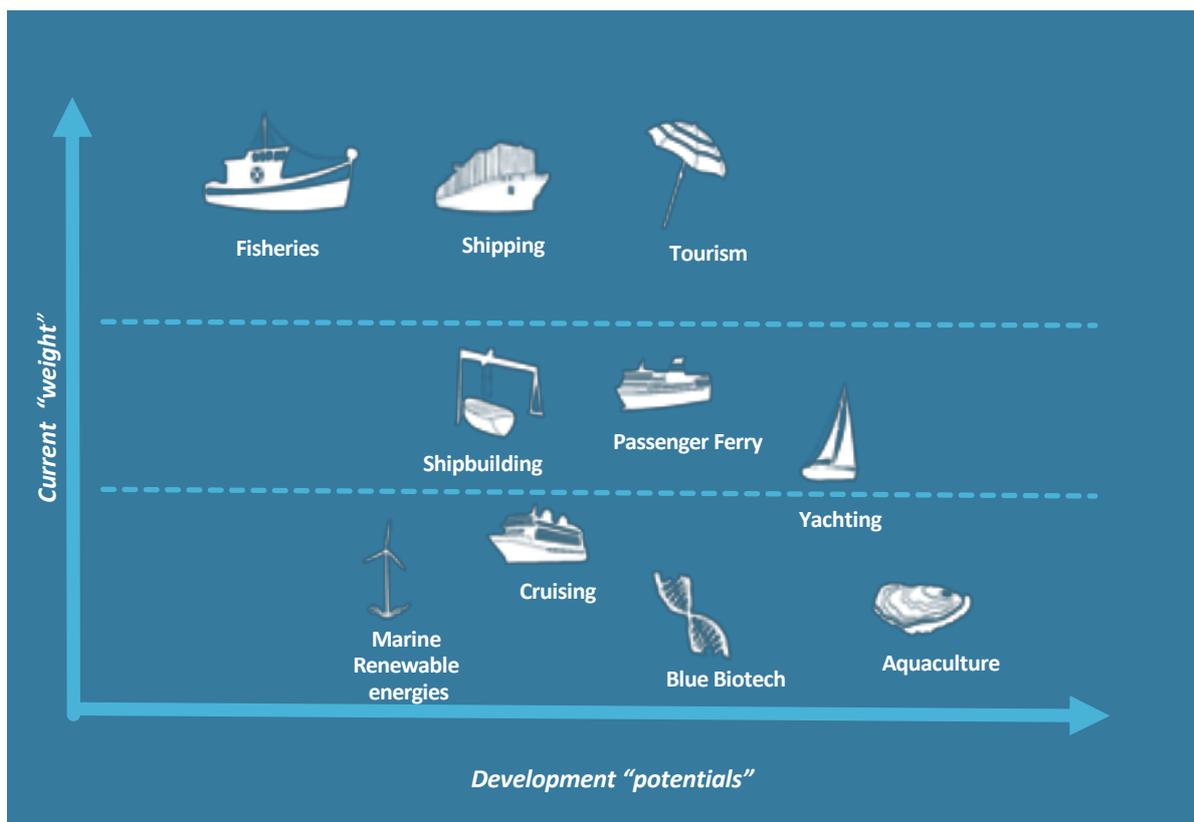
<sup>9</sup> [2018 annual EU Blue economy report](#)

<sup>10</sup> Innovation /education (for emerging sectors) or adaptation/training (for existing sectors)

such performance in the future (tourism may still remain relevant, but other emerging activities such as yachting or aquaculture, which are expected to grow exponentially in the next years).

An overview of such heterogeneity regarding the weight of the sectors (GVA and jobs) and their potential of development is presented on figure 1. This will be the basis for discussion during the workshop aimed at identifying tailored support actions.

Figure 1. Overview of the state of play of the maritime economic activities in the Black Sea



Source: BGBS Facility (based on secondary sources and inputs shared during national workshops held in 2018)

Furthermore, discussions held during the workshops organised by the Facility pointed to a number of challenges. These challenges need to be addressed in order to ensure an economically, socially and environmentally sustainable blue growth in the Black Sea:

- **Established activities in relatively 'established' and large economic sectors are not fully sustainable. Innovation should be fostered to maximise their positive impact for local communities and ecosystems.** Relatively established maritime economic activities such as

tourism, fisheries, shipbuilding, shipping, ferries require strong adaptation and innovation within existing business models and services offered in accordance with international standards (e.g. Ports services) or to meet customers demand regarding sustainability (e.g. ecotourism) to fulfil their economic potential and become more resilient. This would allow for the maximisation of their potential to boost local economic returns and provide for more stable and high-quality jobs (e.g. in tourism, in shipping).

- ***Emerging activities, currently representing a limited share of the overall GVA and jobs for the blue economy in the region. Those activities require greater support to fulfil their development potential.*** There are specific and valuable niche markets with large potential in the Black Sea - small-scale yachting, cruising and aquaculture - which could be instrumental in the diversification of above-mentioned 'traditional' sectors based on the re-use of the skills between their value chain (fisheries and aquaculture or fisheries and yachting (pescatourism)).
- ***Underdeveloped economic activities have still uncertain potential, due to the lack of availability of essential and applied marine research data. Hence further basic research is required to boost their growth in a sustainable manner.*** Such sectors include renewable marine energy (e.g. offshore wind) and biotechnologies, for which further research would allow for assessment of their actual potential and prospective pre-commercial opportunities.

Building on this analysis, the regional seminar aims to provide the stakeholders from various maritime and marine sectors a forum to discuss the main challenges and opportunities for blue growth in the Black Sea. The participants will be asked to identify strategic joint actions to address the bottlenecks. To do so, structured exchanges will be held through a series of "thematic workshops".

## Chapter 3

### 1. Objectives to be achieved in the Black Sea

**What are the objectives foreseen which will lead to sustainable management of fisheries and sustainable development of aquaculture for local communities?**

***Objective 1: Improve scientific knowledge, research and advice on fisheries***

The improvement of the scientific knowledge related to the fish stocks and the environmental factors (i.e. climate change, invasive species) affecting fisheries in the Black Sea. This is of utmost importance to better understand the overall context and better integrate scientific advice in decision-making and to achieve sustainable management. The need for scientific and technical advice on fisheries based on data at sea basin level is high. Progress in fisheries research is occurring but joint efforts at regional level need to be encouraged. The use of new

research technologies and methodologies have accelerated these advancements. Under the umbrella of the Common Maritime Agenda for the Black Sea, coordinated regional scientific projects and research activities have the opportunity to be implemented. To this end, the sea basin will take benefit of targeted and specific technical activities, complementing the provision of quality scientific advice in support of management for sustainable Black Sea fisheries. At regional level, sharing of fisheries scientific and research knowledge is very important to develop a common and effective approach in management. Academia, research community, stakeholders, policy-makers will be following the developments on their capacity to create synergies towards sustainability of fisheries in the Black Sea. The GFCM BlackSea4Fish project is a recent successful example of ongoing multilateral scientific cooperation, based on the biological, economic and social specificities of the Black Sea. Joint regional surveys at sea carried out by multinational teams of scientists will enhance data collection and improve scientific knowledge and advice on fish stocks.

***Objective 2: Enhance multilateral cooperation between stakeholders***

The regional and multilateral cooperation in the Black Sea is a key objective with a view to identify common needs, shape a common agenda, act jointly and take benefit of common achievements towards sustainability of fisheries and sustainable development of aquaculture. In this context, a new fisheries dynamics was established by the General Fisheries Commission for the Mediterranean (GFCM) since 2016 with the Bucharest Declaration. The *High-Level Conference on Black Sea fisheries and aquaculture* which resulted in the signing of the *Sofia Ministerial Declaration*<sup>11</sup> in June 2018, established a new fisheries governance in the Black Sea. The implementation of this concrete roadmap of actions at regional level over the next ten years, enhancing multilateral cooperation, paves the way for a sustainable Black Sea future the new fisheries governance in the Black Sea involves all stakeholders and empowers fishers, especially within small-scale fleets, to take responsibility in the participative management of fisheries. It also creates a level playing field at regional level. Enhanced multilateral cooperation within all Black Sea riparian states is an important element of this new fisheries governance, promoting sustainable and rational exploitation of living marine resources and the sustainable development of aquaculture. Furthermore, the institutional strengthening of fisheries administrations in Black Sea riparian countries is a key component of cooperation. Cooperation aims at fostering increased participation and involvement of national experts, capacity-building opportunities, and training in various areas (i.e. use of new technologies for monitoring) to support fisheries and marine aquaculture management in the Black Sea. The GFCM small-scale fisheries platform is a recent successful example of networking and cooperating to implement the Regional Plan of Action for small-scale fisheries, helping small-scale fishermen to change and develop new tools at local, regional and multilateral level.

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<sup>11</sup>[https://ec.europa.eu/fisheries/sites/fisheries/files/docs/2018-06-07-sofia-declaration\\_en.pdf](https://ec.europa.eu/fisheries/sites/fisheries/files/docs/2018-06-07-sofia-declaration_en.pdf) Bulgaria, Romania, Georgia, Republic of Moldova, Turkey and the European Commission on behalf of the EU signed the Declaration

***Objective 3: Make fisheries sustainable and develop sustainably marine aquaculture***

Fisheries and aquaculture are key activities for the blue economy in the Black Sea, particularly in terms of job generation. Fisheries are traditional activities, supporting livelihoods and local economies of coastal communities, providing high quality food and income to fishers. But the activities are strongly affected by the negative effects of climate change, as well as uneven development of aquaculture around sea basin. In addition, severe threats to the Black Sea living marine resources are overfishing, IUU fishing, incidental catches, discarding practices and ghost fishing. The overfishing needs to be considered in a realistic and not fatalistic way, as sustainable management of resources has already resulted in increasing profitability more than 4 % in other sea basins. The fight against IUU fishing is a high priority at regional level with a view to better understand the added value of complying with conservation measures. The enhancement of regional cooperation and joint efforts in fighting IUU fishing will create a new culture of compliance at Black Sea level, highly needed for the sustainability of Black Sea fisheries. It is essential to make fisheries and marine aquaculture sustainable via innovative technological developments but also the adaptation and diversification of the sectors by implementing circular economy approaches or by boosting innovation towards marine biotechnologies and diversification of catches. Implementing the GFCM Strategy for the sustainable development of Mediterranean and Black Sea aquaculture and promoting the Black Sea GFCM Aquaculture Demonstrative Centres (ADCs), tailor-made to the Black Sea specificities, will shape a future for the sector that it is more competitive, sustainable, productive, profitable and equitable at local, national and regional level. The ADCs would benefit the riparian countries and would be instrumental in implementing effective knowledge sharing and dissemination of marine aquaculture best practices.

**2. Challenges**

**What are the specific challenges and gaps to be addressed to achieve such objectives?**

***Challenge1: Achieve biological, environmental and socioeconomic sustainability of Black Sea fisheries***

At least 9,500 fishing vessels are operating in the Black Sea, belonging to the fleets of Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine. Black Sea fisheries directly support the employment of about 23,500 persons, with many jobs indirectly dependant on the fishing sector. In the same countries, an estimated 8,700 aquaculture farms (marine and freshwater) generate direct and indirect jobs for more than 39,000 people. The pressure put on Black Sea fisheries sustainability is challenging. The status of fish stocks is poor and declining due to unsustainable fishing practices, overfishing and illegal, unreported and unregulated fishing (IUU). IUU presence is significantly high in the Black Sea. Practices that would contribute to an underground economy and IUU fishing activities should be tackled at regional level with joint

efforts through effective monitoring, control and surveillance. Furthermore, it is important to promote access to and use of new technologies within small-scale fisheries, with a view to improving safety, as well as monitoring and control. The implementation of the GFCM Regional Plan of Action to fight IUU in the Black Sea is an effective tool towards sustainability of fishing resources. In addition, increasing pressures are exerted on Black Sea marine ecosystems by a variety of human activities, as well as transport, intense maritime traffic, coastal urbanisations and unplanned development of coastal zones, agriculture and industry oriented pollution, climate change and invasive species affecting the state of the fish stocks and also causing degradation of marine environment, additionally to the pressure of climate change and invasive species. Fisheries and environmental research will improve scientific knowledge and advice for decision-making at regional level. The Black Sea fishermen play a central role on the sustainable use of fishing resources and sustainability is linked to their fishing behaviour and attitude. Joint efforts to create a new culture of responsible fishing attitude are highly needed in the Black Sea. The state of stocks and the recovery of those in overexploitation is critically linked to a more prosperous fishing sector and the need to secure jobs in coastal communities. Thus, healthy fish stocks and marine environment are fully linked to socioeconomic sustainability of fisheries and subsequently to blue economy and growth.

***Challenge 2: Support fisheries towards sustainability - on-land facilities, infrastructures–market chain – training, including small-scale fisheries (SSF)***

In the context of local community development, improvement of infrastructures and landing facilities, based on sector real needs will improve handling of local fish products, in particular for small-scale fisheries, noting that SSF represents at least 90% of the total fishing vessels in the area. The first processing of landings by the fishermen themselves, their cooperatives or their producer organizations in order to expand the shelf life of products would bring the needed added value. Diversification of fishermen activities such as entrepreneurship and leadership training, nautical and ecological tourism, recycling waste found at sea, marine scientific sampling missions has a great potential in the Black Sea. Complementary to fishing activities, fishermen could actively participate in the circular economy, for instance, by establishing plans for the disposal and recycling of recovered nets in order to reduce the impacts of ghost fishing and such plans may include rewarding schemes for collecting marine litter, extremely important for the Black Sea. At local and regional level, the reinforcement of the valorization of the sector will maximize the economic benefits. The establishment of regional plans, in particular for small-scale producer organizations will result to the increase of their profitability and improve the quality and traceability of fish products. Access to market, traceability schemes, certified seafood labels are key elements for added value and profitability. The need for training is high among Black Sea fishermen, in order to improve their work conditions and their fisheries-specific skills, such as, on improving knowledge of innovative solutions and technology developments on board, on innovative solutions for the valorization and utilization of invasive species.

***Challenge 3: Marine aquaculture is unevenly developed at regional level – the regional potential along value chain***

The potential of aquaculture as a major source of food and income for the Black Sea communities should be assessed. The sustainable development of aquaculture should be supported to contribute to food security in the Black Sea and to strengthen coastal economies. Further sustainable development of aquaculture will boost synergies and interactions between maritime sectors and development of the blue economy in the Black Sea. To this end, actions could be promoted aiming at farming of food fish products, market access and trade, thereby creating economic benefits, employment opportunities and reducing the current stress on marine capture fisheries. There are few alternative sources of income for those working in the fisheries sector. Thus, this sector is important for the socioeconomic viability of coastal communities. Investing in the sustainable development of the blue economy (aquaculture, blue biotechnologies) is an attractive alternative for fisheries under increasing pressure. Development of coastal aquaculture is globally considered way of increasing fish production. The uneven development of aquaculture around the sea basin is characteristic for the Black sea. Even though some of the countries have already initiated certain aquaculture development activities, the need is high to extend best practices, to share knowledge, to develop planning instruments based on area specificities at regional level, through regional cooperation. This is an effective way of promoting advancements. The GFCM Aquaculture Demonstrative Centres is a recent successful example creating a platform of experts and stakeholders. The primary obstacle to overcome towards development is that various technical elements have to be tackled, such as **high dependence on suitable sea sites for high production and associated costs, marine spatial planning, coverage of value chain and dependence on global market for juveniles**. The regional potential of aquaculture should be assessed along value chain and target added-value driven by innovation.

### 3. Discussions and intervention input

*The discussions in this panel will centre on the concrete actions and projects needed to boost innovation, sustainability and diversification of the sectors. This will include discussions on how to promote, for example: (a) innovative circular economy approaches, (b) use of innovative technological developments and tools, (c) innovative joint research projects, (d) innovation towards marine biotech, (e) traceability of catches, valorisation of catches and diversification of activities.*

A set of questions is now proposed, as a basis for discussion during the panel:

- Which support could be provided by the research community in matters of **project development and fisheries surveys on stocks** including climate change impacts on fisheries, invasive species, illegal fishing practices and IUU fishing? In which way could **value generation and diversification of the catches** be enhanced to meet market demands, in particular for small-scale fisheries?
- As an alternative for the sector, how could **innovation** be fostered in blue biotechnologies, marine technologies and aquaculture? In which way could dedicated clusters help with this? Are there already identified hotspots from where **high-value products** can be potentially developed? Which recommendations could be given regarding their potential use and conservation? What are the most relevant areas for knowledge **sharing** and technological development **from research to market for fisheries and aquaculture in the Black Sea**?
- **Sanitary safety** and **environmental status** are key conditions for sustainable development of aquaculture and increase of production. From the current state of the aquaculture sector in the Black Sea, which lessons learnt could be fitted from other sea basins for the benefit of the sector?

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