



## Stakeholder Seminar on Blue Economy

“Towards a Common Maritime Agenda for the Black Sea”

19 March 2019 in Istanbul

*Concept paper*

Workshop 6: Blue skills and blue careers of the future



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**Concept paper**

**Workshop 6:**

**Blue skills and blue careers of the future**

## 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 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>6</sup>.

The outcomes of the national workshops<sup>7</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>8</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>9</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 such performance in the future (tourism may still remain relevant, but other emerging

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

<sup>7</sup> <https://blackseablueeconomy.eu/our-events>

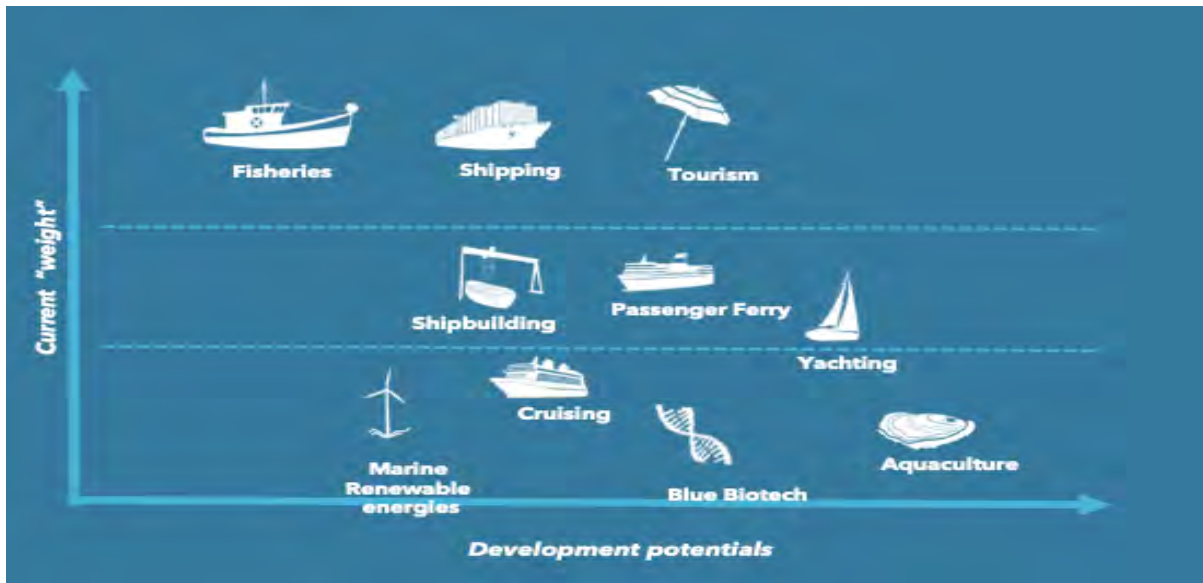
<sup>8</sup> [2018 annual EU Blue economy report](#)

<sup>9</sup> Innovation /education (for emerging sectors) or adaptation/training (for existing sectors)

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 panels".

## Chapter 3

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

**Which objectives can be pursued to adapt blue skills and make maritime career more appealing in the Black Sea?**

#### ***Objective 1: Constant upgrade skills and competences in accordance with market demand***

The blue economy is rapidly evolving and full support is needed to accompany the changing needs of businesses involved. New technologies are being constantly developed to ensure that blue economy activities are innovative and sustainable (e.g. green shipping or fishing, smart ports), and boost greater returns and added-value (GVA and jobs) both for operators and local communities. This essential process requires a **constant upgrading of the existing workforce, in accordance with market demands and the highest international educational standards**. Fundamental to this is the development of effective professional education, training schemes and learning solutions for upskilling and reskilling of the regional workforce.

To be valuable such an approach implies an **effective two-fold collaboration between industry and all educational bodies relevant to blue economy in the Black Sea**: on the one hand it should align training/educational offerings to the specific needs of the industry, by

integrating the most recent technological and market developments, while on the other hand it should allow industry to anticipate future blue skills needs through better-targeted intelligence and forecasting activities by academia. Connecting these two worlds – industry and academia – requires an “opening” of the academic world to new subjects, whilst simultaneously breaking “sectoral” silos often persisting amongst the different activities in the blue economy.

***Objective 2: Fully develop the ability to understand and uptake advanced technologies***

The blue economy of the future is bound to become increasingly *knowledge-based*, and as such it will require professionals across all sectors to be able to understand, use and exploit the wide range of (big) data and information (generated through a wide range of sources and devices). Professionals in the sector will have to **develop specific sets of high-level skills for the understanding and use of a wide and complex range of “big data” and advanced technologies (artificial intelligence, robotics, 3D printing, etc.)**, to be able to offer value-added services in an increasingly interconnected economy. The effort to support adequate skills in this area should be equally shared by academia across a wider range of disciplines, as well as businesses, investors and often civil society at large.

***Objective 3: Attract young talents and qualified professionals***

Further to the provision of appropriate skills, it is essential to **create the conditions to support a more appealing blue economy sector for young people in the Black Sea**. Many economic activities in the blue economy are, in fact, experiencing difficulties finding eligible employees, a trend which is expected to continue throughout the foreseeable future. The 2014 Communication from the European Commission "*Innovation in the blue economy: realising the potential of our seas and oceans for jobs and growth*", for example, pointed out that the shortage of a skilled workforce is one of the main obstacles to further development of the blue economy. Moreover, many economic activities across the blue economy suffer from poor visibility and limited appeal amongst young and talented professionals. **Greater visibility across all maritime professions and improved appeal to young talents** – starting from the earliest stage in the educational cycle – are a precondition to strong vocations for future generations of blue economy workers.

***Objective 4: Promote full circulation of skills and workers in the Black Sea***

Finally, and importantly, a strong blue economy requires **full circulation of skills and workers across the sea-basin**, so as to achieve greater impacts for local businesses and society at large. Such actions would also assist in reducing “brain drain” from the region through the provision of attractive conditions for employment within the sea-basin and through raising awareness on existing and future maritime professions available. To do so, it is pivotal to share good

practices related to human and technical capital generation across the Black Sea, foster common training programmes and transnational mobility of learners and teachers. Cross-regional blue internship programmes for maritime experts, vocational training and other dedicated programmes are essential to foster blue careers across the sea-basin, and particularly to address the specific needs of local SMEs.

## 2. Challenges

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

*Challenge 1: Limited coordination across stakeholders (researchers, enterprises, authorities) prevents the identification of curricula which reflects sectoral needs*

One of the important issues affecting the matching of demand and supply of blue skills in the Black Sea is the **“limited” national coordination**: on one hand within stakeholders in the scientific and research community; on the other hand, between researchers and the private sector (including financing bodies and private investors). As a result, a “mismatch” persists between the profiles resulting from regional training/academic qualifications and the practical competences needed by the blue economy across the Black Sea. The examples in this area range from a better level of foreign languages for workers in the coastal and maritime tourism (“blue tourism”), up to specific skills for Information Technology development in port management. Such a mismatch is a bottleneck for innovation and knowledge transfer potential, which is essential for a sustainable and competitive blue growth in the Black Sea.

Policy-related activities also require highly qualified staff, and support is still needed in the Black Sea to implement an increasingly stringent international regulatory framework and relevant standards (e.g. environmental protection, safety assurance and quality for services and products). In this regard, for example, the Black and Caspian Sea Project<sup>10</sup> already supports selected Black Sea countries to effectively perform their international obligations and exercise an effective jurisdiction.

***Challenge 2: Uptake of advanced technologies across all economic activities is not supported by a still limited educational offer in this area***

The **uptake of advanced technologies** (big data analytics, artificial intelligence, additive manufacturing, etc.) is also still **too limited to foster innovation in the region**. For example, maritime surveillance data currently available to enable real time surveillance may potentially

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<sup>10</sup> <http://www.emsa.europa.eu/implementation-tasks/training-a-cooperation/traceca-iii.html>



serve a range of other essential policy purposes (e.g. spatial planning, environmental impact assessments). Also, better understanding and usage of big data analytics could certainly favour activities under the umbrella of the Black Sea Littoral States Border/Coast Guard Agencies Cooperation Forum (BSCF). These operations require advanced skills in order to make full usage of such new technologies (e.g. in the design, planning and execution cycles), for which a specific training offer is still lacking in the Black Sea.

***Challenge 3: Limited anticipation of the essential educational and skill needs for the future result in a poorly attractive sector for youngsters and qualified professionals***

Some good practices also exist to **attract highly-skilled professionals in the region**, notably the valuable Blue Career Centre of Eastern Mediterranean and the Black Sea<sup>11</sup>, which promotes careers in maritime transport, aquaculture and cruise tourism, amongst other activities. The initiative, however, **does not fully support the anticipation of needs for new and emerging activities** across the region (e.g. biotechnologies, marine renewable energies), so as to further attract (young) talents in areas with high innovation potential by aligning training and educational curricula to new sectoral needs. Efforts in the attraction of highly skilled professionals, including through adequate employment conditions, remain therefore limited.

***Challenge 4: Existing cooperation is ineffective to foster skills circulation and overall mobility***

Greater **cooperation amongst educational and training institutions** is currently promoted by the Black Sea Universities Network<sup>12</sup>. As stated in a recent declaration<sup>13</sup>, the initiative is pivotal to foster greater educational cooperation in the region. To be fully effective, nevertheless, the network would benefit from a greater dialogue with enterprises and administrations active in the blue economy. Such dialogue would in fact allow to **better identify the specific needs**, with respect to education and skills, which are essential to define a tailor-made educational curricula to boost economic growth across more mature and emerging activities in the Black Sea. Importantly, such curricula should **build on the specific competencies and expertise** of the various educational institutions involved in the network, and include both traditional and “on-the-job” training activities. A portfolio of twinning initiatives could also be identified by the network, as a way to foster exchange of practices amongst training institutions – both across the Black Sea and internationally.

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<sup>11</sup> <http://www.bluecareers.org/>

<sup>12</sup> <http://www.bsun.org>

<sup>13</sup> THESSALONIKI DECLARATION OF THE UNIVERSITY RECTORS FROM THE BLACK SEA REGION (June 19th 2018)

### 3. Discussions and intervention input

*The discussions in this panel will centre on the opportunities to shape an attractive maritime career curriculum in the Black Sea region as well as the debating of ideas about how to encourage cross-regional exchange programmes for maritime experts and boost blue careers. How to effectively raise awareness about existing funding opportunities and university-business partnerships that stimulate the development of blue skills will also be part of the debate.*

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

- Are the objectives indicated and the related challenges valid? Are there additional objectives that should be pursued?
- How can we increase cooperation between education and research institutes, industry, innovation centres and public authorities across the Black Sea?
- How can we accelerate the uptake of (formal and informal) learning, education and training in the region, raise awareness on existing and future maritime professions and make them more attractive to young people?
- How can we encourage cross-regional internship programmes for maritime experts, and support the exchange of good practices to enhance existing regional partnerships?
- Can we identify valuable project ideas to support all the actions above? Who should be involved and under which financing stream could these projects be supported?
- Any additional project and actions suggestions?

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