

## Annex 1

### Common Maritime Agenda for the Black Sea

This Common Maritime Agenda for the Black Sea is set and agreed by the seven participating countries<sup>1</sup>, as a follow-up to the commitment of the 2018 Burgas Ministerial Declaration “Towards a Common Maritime Agenda for the Black Sea”<sup>2</sup>.

#### Goal I: Healthy marine and coastal ecosystems

##### State of play and challenges:

Black Sea and its coastal and marine ecosystems are at risk<sup>3</sup>. This is partly due to climate change effects, such as sea-level rise, erosion, ecosystem changes, acidification, natural meteorological effects, and elevation of temperature. At the same time, unsustainable past and existing maritime, coastal and terrestrial<sup>4</sup> activities - pollution, marine litter and waste water and unsustainable practices - have a direct impact on the marine and coastal ecosystem. The main challenge is to ensure environmental protection and sustainability in the exploitation of coastal and marine resources across the Black Sea. To achieve this, regional voluntary cooperation and joint work is required to improve environmental protection of the shared natural heritage.

One of the objectives of the Strategic Research and Innovation Agenda for the Black Sea (SRIA)<sup>5</sup> is generating scientific knowledge. This includes better ecosystem assessments, forecasts and management, as well as understanding of the vulnerability of the ecosystem. Knowledge is the key element towards science-based and well informed decision-making. Such policy making paves the way to a sustainable blue economy<sup>6</sup>.

##### **Gaps to be addressed:**

- Most of the existing protected areas<sup>7</sup> are onshore - in the coastal zones, while there are fewer marine protected areas.
- Limited awareness of human impacts on the Black Sea.

<sup>1</sup> Republic of Bulgaria, Georgia, Republic of Moldova, Romania, the Russian Federation, the Republic of Turkey, Ukraine

<sup>2</sup> [https://ec.europa.eu/maritimeaffairs/sites/.../sites/.../burgas-ministerial-declaration\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/.../sites/.../burgas-ministerial-declaration_en.pdf)

<sup>3</sup> Source: <http://www.blacksea-commission.org/environment.asp>

<sup>4</sup> Activity only based on land occupation or land resources exploitation (e.g. agricultural).

<sup>5</sup> [https://ec.europa.eu/newsroom/mare/document.cfm?doc\\_id=59035](https://ec.europa.eu/newsroom/mare/document.cfm?doc_id=59035)

<sup>6</sup> For the purposes of this Common Maritime Agenda the participating countries have a common understanding of the blue or maritime economy as - all economic activities, including sustainable exploitation and preservation, related to oceans, seas and coasts, covering a wide range of interlinked established sectors with long term, proven contribution to the economy, such as shipping, shipbuilding, fisheries, traditional sun-sea tourism, and emerging new sectors that show high potential for future development, including blue bioeconomy/biotechnology, ocean energy, offshore wind energy, desalination, coastal and environmental protection as source of economic growth.

<sup>7</sup> This goes without prejudice to the possibility of the legal economic activities in the protected areas.

- Even if developed and implemented at national level, monitoring mechanisms are not always consistent and adequately financed to support a sustainable blue economy in the region.
- The pressure put on Black Sea fisheries resources sustainability is challenging. The status of certain fish stocks is in decline due to climate change, pollution, irresponsible fishing behaviour and unsustainable fishing practices, competition from other human activities, such as industry, tourism, marine transport, etc. 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 - and in particular in sustainable aquaculture - is an attractive alternative for fisheries under the increasing pressure.

### **Priority 1: Ensure the protection and sustainability of the marine ecosystem**

The resilience of the Black Sea ecosystem will be improved by adequate protection and by achieving a good environmental status of the sea and rivers flowing into the sea. The environmental and anthropogenic pressure to the biological resources will be reduced by taking common or joint protection measures by the Contracting Parties of the Convention on the Protection of the Black Sea Against Pollution. The fisheries stocks will be able to be brought at sustainable levels, ensuring appropriate protection measures, increased income and meeting the demands of the coastal communities for healthy living conditions. If applied, the ecosystem approach<sup>8</sup> at sea basin level will contribute to meet national, regional and international environmental commitments.

### **Actions:**

- 1) **Ecosystem approach.** Promote the development of a consistent approach for the protection and, when needed and economically feasible, restoration of the Black Sea ecosystem. Promote further research providing new knowledge to mitigate the impacts of global climate change and the impact of the multiple environmental and anthropogenic stressors on the Black Sea.
- 2) Support research and innovation projects for improved **tools for ecosystem forecasting.**
- 3) **Protected areas.** Encourage joint projects amongst protected areas - marine, coastal and wetlands - connecting the sea, limans, deltas, lagoons and rivers in the Black Sea region. Exchange best practices on the management of the protected areas among the Black Sea countries.
- 4) Encourage **research and valorisation of biodiversity and natural heritage**, and promote it internationally.
- 5) Encourage and promote **joint monitoring** according to Black Sea Integrated Monitoring Assessment Programme (BSIMAP)<sup>9</sup> among the Black Sea countries.

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<sup>8</sup> Ecosystem-based approach to the management of human activities enables a sustainable use of marine goods and services with a priority given to achieving or maintaining good environmental status of the marine environment, to continuing its protection and preservation, and to preventing subsequent deterioration.

<sup>9</sup> Black Sea Integrated Monitoring Assessment Programme, developed by The Commission on the Protection of the Black Sea Against Pollution.

## **Priority 2: Address marine pollution and plastic litter**

In accordance with the actions taken under the Convention on the Protection of the Black Sea Against Pollution, the added value of this priority is to support the change of Black Sea citizen and mariner habits to reduce marine litter production and marine pollutions. Added value will come from the enhancement of best practices and capacity building, in particular on circular economy.

### **Actions**

- 1) **Raise awareness** among public authorities and citizens on marine environmental issues and the impact of human activities on marine ecosystem. Support media campaigns on best circular economy practices, marine litter and marine litter harvesting, and waste reduction. Support fisherman and citizens` regional awareness raising campaigns aiming to reduce the impact on marine protected areas, including on the cetaceans.
- 2) **Education on marine ecosystem.** Encourage common projects on marine environment protection at all educational levels, including early childhood education.
- 3) Promote the practice of **marine litter harvesting** and **recycling**, provided that those are environmentally sound and regionally coordinated.
- 4) Promote the implementation of the **Black Sea Marine Litter Regional Action Plan**, adopted by the Commission on the Protection of the Black Sea Against Pollution in 2018.
- 5) Promote cooperation and joint projects on the **prevention and response to pollution** caused by ships and ports, and mitigation of the impacts of harmful aquatic invasion from ship ballast water.
- 6) **Impact of maritime activities.** Improve the understanding of the impact of the maritime activities on the environment.
- 7) **Support research** on the challenges related to eutrophication<sup>10</sup>, invasive species, emerging pollutants and litter with further and international research efforts.

## **Priority 3: Support sustainable fisheries and aquaculture in the Black Sea**

The new dynamics towards sustainability of fisheries and sustainable development of aquaculture is being established in the Black Sea by the 2016 Bucharest Declaration<sup>11</sup> and the 2018 Sofia Ministerial Declaration<sup>12</sup>, under the umbrella of the General Fisheries Commission for the Mediterranean (GFCM-FAO)<sup>13</sup>. Enhanced multilateral cooperation among the Black Sea states is an important element of the new dynamics, which promotes sustainable and rational exploitation of living marine resources and the sustainable development of aquaculture. The implementation of regional joint actions will bring the added value needed to promote advancements on fisheries and aquaculture in the Black Sea, to maximize the

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<sup>10</sup> Eutrophication: the water becomes overly enriched with minerals and nutrients which excessive growth of plants and algae. This process may result in oxygen depletion of the water body. One example is the "bloom" or great increase of phytoplankton in the water as a response to increased levels of nutrients.

<sup>11</sup> <http://www.fao.org/gfcm/meetings/blackseaconference2016/en/>

<sup>12</sup> <http://www.fao.org/gfcm/meetings/blackseaconference2018/sofiadeclaration/en/>

<sup>13</sup> The Russian Federation is not a member of the GFCM.

economic benefits and to ensure the sustainable development of the sector and coastal communities.

#### **Actions:**

- 1) Support for fisheries **research projects, including fisheries research at national basis, and joint scientific surveys**, including on climate change and the impact of invasive species on fisheries and incidental catch of vulnerable species.
- 2) Support for **aquaculture research and joint pilot projects** – in private and public sectors, including the Black Sea aquaculture demonstration centres and demonstrative aquaculture modules.
- 3) Organisation of **workshops and seminars** on fisheries sustainability and sustainable development of aquaculture.
- 4) Support for the use of **innovative marine technologies and IT monitoring tools** for fisheries vessels, including small-scale fisheries.
- 5) Foster **capacity building and training** activities on fisheries sustainability and sustainable development of aquaculture for stakeholders.
- 6) Support for projects enhancing the **valorisation of catches and diversification of activities** to maximize the economic benefit of the fisheries sector, in particular for small-scale fisheries.

#### **Priority 4: Supporting innovative marine research infrastructures in the Black Sea**

Understanding the Black Sea and its fragile ecosystems requires robust data collection and continuous monitoring and observation, ideally based on uniform standards. State-of-the-art research infrastructures are becoming more complex and more costly. No single country has enough resources to support all the research infrastructures it needs.

Coordination, sharing and optimization of existing research infrastructures should be strengthened. This could be done by fostering the emergence of new, integrated research facilities, by more open and accessible national and regional research hubs and facilities. The use of best practices of multilateral cooperation in Europe and in the world, like experience from international organisations, such as the Organization of the Black Sea Economic Cooperation and the Commission on the Protection of the Black Sea Against Pollution, should be strengthened.

#### **Actions:**

- 1) Invest in and connect **research infrastructures** across the region and with infrastructures beyond the region<sup>14</sup>. Foster the development of new marine based technologies by harnessing the fourth industrial revolution to promote safe and sustainable economic growth of the marine and maritime sectors.
- 2) **Observing Systems**. Enable development of smart observing and monitoring of the ecosystems and assessment frameworks for more sustainable ecosystem, mitigation of climate change impact and accurate environmental forecasting management.

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<sup>14</sup>Such as, for example, the International Centre for Advanced Studies on River–Sea Systems, DANUBIUS RI and the Centre for Marine Ecosystems and Climate Research, DEKOSIM.

### **Priority 5: Encourage the production, management and sharing of marine and coastal environmental knowledge for effective environmental monitoring and observation**

Production of quality data will allow effective environmental monitoring and observation, including a better understanding of human impact and a better assessment of the sustainability of maritime and coastal economic activities. The understanding of the marine ecosystem of the river-delta-sea connections (like the Danube/Black Sea area), including the water quality and biodiversity, will be encouraged.

#### **Actions:**

- 1) **Encourage science-based policy making process.** Contribute to an enhanced regional science-policy dialogue on formulating coastal and marine policies and programmes.
- 2) Encourage **marine data collection** and sharing through existing databases. Try to expand the geographical scope of these initiatives across the region. Improve the data portal on environmental data in coordination with the Commission on the Protection of the Black Sea Against Pollution<sup>15</sup>. Call for collection, maintenance and storage of environmental data through cooperation between governmental agencies. Call for the development of a harmonized set of working methodologies, standards and procedures on coastal and marine data collection.
- 3) Establish region-wide mechanisms of monitoring and **early warning** for natural or/and man-made disasters.
- 4) **Coastal geohazards.** Harmonise and expand the coastline monitoring and observation systems along the Black Sea. Promote better understanding of the coastal hazards.
- 5) **Increase ecosystem resilience knowledge.** Support improved understanding of specific features of the Black Sea ecosystem, ecosystem dynamics and functions.

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<sup>15</sup> For instance - by analogy with the Barents Portal and the HELCOM databases.

## **Goal II: A competitive, innovative and sustainable blue economy for the Black Sea**

### **State of play and challenges:**

The main aim of this goal is to show how to boost the blue growth potential of the Black Sea basin. It will do so by prioritising actions linked to innovation and connectivity, related to established and emerging sectors. It will seek to develop synergies among the maritime sectors and attract, retain and train talent within the region.

The blue economy in the sea basin is strongly dependent on the established maritime sectors, such as transport, shipbuilding, fisheries, and sun-sea tourism. These sectors continue to grow but still need to be modernised. In particular the environmental sustainability, resilience and competitiveness of those sectors on the global market could be improved.

Improving connectivity within the region should also be prioritised to make the most of the sea basin's potential to develop the bridging role of the Black Sea on the East-West and North-South axes and between Europe and Asia.

Supporting research and innovation across the blue economy is key to unlock the region's growth potential and stimulate the transfer of knowledge “from the labs to the market”. Investment in people, talent and workforce is essential. This is all more important given the vital role of science-based decision-making for the benefit of coastal communities and sustainable economic growth in the region. As the 2018 Burgas Vision Paper - *A Blue Growth Initiative for Research and Innovation in the Black Sea*<sup>16</sup>, outlines: “science and innovation support the development and implementation of coastal and maritime policies and strategies in the Black Sea, including better ecosystem assessments, forecasts and management; understanding the vulnerability, risks and possible mitigation measures”...and continues: “education, science and innovation is an important tool to fully unlock the potential for blue growth ... of the region”.

### **Gaps to be addressed:**

- Limited marine and maritime research and innovation. Ineffective transfer of knowledge into innovation.
- Emerging sectors based on new technologies are not yet sufficiently developed and promoted both at national and regional level. Also, their importance is insufficiently acknowledged at national and regional level<sup>17</sup>.
- Transport systems and connectivity infrastructure are not sufficiently environmentally, socially and fiscally sustainable and financially viable.

<sup>16</sup> [https://ec.europa.eu/maritimeaffairs/maritimeday/sites/.../burgas-vision-paper\\_en.pdf](https://ec.europa.eu/maritimeaffairs/maritimeday/sites/.../burgas-vision-paper_en.pdf)

<sup>17</sup> Where applicable

- Existing blue skills and know-how are not sufficient to ensure the level of standards in services, which is required by the market, in particular in sectors such as tourism of several types (season based, cultural, adventure/sports) or port services.
- Existing skills do not correspond to business demand for skilled manpower for the existing or emerging sectors.

**Priority 1: Foster innovative business models, stimulate research and innovation, and sustainable growth and up-to-date jobs**

Added value will be created through adaptation of the business models of the established sectors along with innovation and technologies. This will generate greater income and high-quality jobs within the Black Sea region. Support for marine and maritime research and innovation will create synergy, increase economic benefit and contribute to mitigate the impacts of environmental hazards. Incentives for marine and maritime research and innovation are needed in the established and emerging blue economy sectors.

The development of a regionally coordinated approach between the maritime infrastructure, the activities related to the sea and rivers that are flowing into the Black Sea has strong potential for added value. This is potential for sustainable economic development, environmental, social and scientific benefits and job creation at local level in the short-to-midterm.

Local value could be created all along the value chain by linking different maritime activities, whilst diversifying the traditional sectors (e.g. small cruise and natural and cultural heritage). Clean-up campaigns and seasonal workers involved in such activities will serve towards a cleaner marine environment and provide economic benefit for the local communities.

**Actions:**

- 1) **Innovation in blue biotechnologies, marine technologies and aquaculture.** Improve the scientific knowledge of the Black Sea habitats and organisms from which high-value novel products can be developed, while taking into account environmental and biodiversity aspects. Accelerate knowledge transfer and technological development from research to market.
- 2) **Research in marine renewable and alternative energy.** Provide better scientific knowledge and understanding for the development of renewable energy and alternative energy sources<sup>18</sup>.
- 3) Promote research for the optimisation of the **regional development**, taking into account the need for economic, social infrastructure and environmental improvement.
- 4) **Food systems.** Further develop research promoting sustainable fisheries and other food sources, as well as high-tech and eco-friendly aquaculture. Promote innovative circular economy approaches and innovative technological developments – multipurpose use of aquaculture platforms. Generate added value through the development of processing and marketing chains.

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<sup>18</sup> In accordance with the actions provided for in the Strategic Research and Innovation Agenda.

5) **Tourism.** Promote **all kinds of tourism** - leisure and business, as well as synergies between inland, coastal and maritime tourism, between sun-related, leisure and sport-related and cultural tourism. Promote further exploring of underwater cultural heritage itineraries and the development of the cultural dimension of tourism; cruising including small-scale cruising/yachting; pescaturism and nature tourism. Support the development of the “Black Sea cuisine” brand.

### **Priority 2: Promote transport and digital connectivity of the Black Sea**

Transport is a traditional and well developed sector in the Black Sea. Further modernisation, better exploration of the existing connectivity potential of the sea basin and enhancing the blue economy in the region could only benefit the Black Sea countries.

#### **Actions:**

- 1) **Transport.** Promote sustainable and safe shipping, protecting the marine environment through the development of modern navigation systems, environmentally friendly and carbon emissions efficient and safe ships, in line with the international conventions, such as the Convention for the Control and Management of Ships` Ballast Water and Sediments (BWM Convention)<sup>19</sup>.
- 2) Promote the implementation of all relevant **International Maritime Organisation instruments.**
- 3) **Ports.** Foster smart connectivity and digitalisation of ports and infrastructures, such as green-shipping, eco-ports and ports as smart hubs.
- 4) **Connectivity.** Promote sustainable and comprehensive connectivity, based on international law and internationally agreed practices, rules, conventions and technical standards. Promote sustainable and competitive interconnections for multimodal transport, including with navigable inland waterways. Promote the development of combined transport, including feeder shipping for a better Europe-Asia connection.
- 5) Promote the use of liquefied natural gas (LNG) and compressed natural gas (CNG) as an **alternative to oil-derived fuels** for ships.

### **Priority 3: Promote blue skills and blue careers as an engine for innovation and competitiveness**

The added value of this priority is based on the development of up-to-date and highly specialised skills, in accordance with market demand and international standards.

Labour market policy and training help to better utilize the workforce and provide career development opportunities for lower skilled workers. Supporting workforce development is also strongly emphasized in the Strategic Research and Innovation Agenda for the Black Sea (SRIA).

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<sup>19</sup> <http://www.imo.org/en/MediaCentre/HotTopics/BWM/Pages/default.aspx>



## Actions:

- 1) **Skills.** Promote the development of the human<sup>20</sup> and technical<sup>21</sup> capital in the region. Foster regional training programmes and vocational education, mobility of youth, trainees, workers, learners and teachers. Promote the setting up of skills hubs for the blue economy across the Black Sea, which will increase cooperation between education and research institutions, industry, innovation centres and public authorities. Examine how employment and training systems are responding to the needs of business and what policy levers are being used to increase employer engagement and training programmes.
- 2) **Education.** Promote formal and informal learning, vocational education and training, as well as transfer of educational technologies and knowledge for established and new marine and maritime jobs. Promote collaboration frameworks between industry and educational institutions. Encourage life-long learning, including via regional programmes, and fully exploit the opportunities of the digitalized, on-line life-long learning.
- 3) **Ocean literacy.** Support ocean aware citizens and policy makers committed to contribute to a clean, plastic free, healthy and productive Black Sea.
- 4) **Blue Careers.** Encourage better anticipation of future blue skills needs. Raise awareness of the marine and maritime professions and their appeal to young people. Encourage cross regional internship programmes for marine and maritime experts and internship programmes on blue careers developed by the business sector, in particular SMEs, in cooperation with educational institutions. Collaboration with the Black Sea Universities Network (BSUN) in the areas above is encouraged.
- 5) **Better policies and programmes aligning** on labour market needs and skills. Exchange of best practices and enhanced partnerships between national authorities, municipalities and local authorities, as well as among local authorities and employment/training agencies, in order to adapt national policies to the local socio-economic conditions.
- 6) **Fostering inclusion.** Examine policy tools and mechanisms applied in the region aiming at fostering social inclusion. In particular, initiatives addressing the barriers that workforce is facing to access labour market.

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<sup>20</sup> Skills, know-how.

<sup>21</sup> Infrastructures and services.

## Goal III: Fostering Investment in the Black Sea blue economy

### **State of play and challenges:**

Taking the Black Sea blue economy into the future would require, among others, political will and financial commitment from the national governments. This should be based on clear and science-based priorities and further regional cooperation on maritime affairs. Financial support for regional projects should be sought from international financial institutions, in particular the Black Sea Trade and Development Bank, BSEC Promotion Facility<sup>22</sup>, the EU and regional funds<sup>23</sup>, complementing the national resources.

### **Gaps to be addressed:**

- The financing and funding mechanisms, which are in place across the sea basin, are not sufficiently coordinated and “blended” to allow for the effective support of the blue economy potential across the Black Sea.
- Limited regional coordination between the maritime economic sectors, the scientific, research and education communities, as well as among the financing bodies and private investors.
- Need for infrastructure investment, such as waste and waste water management, port reception facilities, which to take into account the environmental dimension of such investments.
- Limited exchange of best practices among the national authorities on policy making and access to funding.
- Administrative capacity limitations to absorb available funding opportunities.

### **Priority 1: Improve access to financial resources and promote sustainable investment in the blue economy**

The aim of this priority is to improve the coordination amongst private and public financing mechanisms at national, regional, European and international level, by introducing effective mechanisms for blending existing streams and by pooling public and private resources in the area. Actions foreseen will build upon and be coordinated with similar initiatives, in order to provide for higher local returns on investments across the Black Sea.

### **Actions:**

- 1) **Matchmaking.** Set up innovation and matchmaking<sup>24</sup> platforms for maritime activities with high growth potential and matchmaking of SMEs with investors.

<sup>22</sup> <http://www.bsec-organization.org/promotion-facility>

<sup>23</sup> For the programming period 2014-2020: Horizon 2020, European Neighbourhood Instrument (ENI), ENI Cross Border Cooperation programmes; Joint Operational Programme Black Sea Basin/bilateral Cross Border Cooperation programmes; European Maritime and Fisheries Fund (EMFF); Competitiveness of Small and Medium-Sized Enterprises – COSME and its SMEs Instrument, LIFE Programme for the Environment and Climate Action, Erasmus+.

<sup>24</sup> Such as a Virtual Knowledge Centre (VKC). The objective of a VKC will be to provide a centralised platform for information on blue economy to the stakeholders and to improve synergies across the stakeholders and blue economy related projects in the Black Sea. The will be supported by the European Commission and managed by BSEC PERMIS.

Encourage matchmaking and networking events between employers and potential employees.

2) **Start-Ups.** Create, support and promote start-ups oriented towards the circular and blue economy in the Black Sea region.

3) **Investment.** Promote investment opportunities via dedicated funding programmes, websites and annual events.

4) **Capacity building.** Collaborate to train, build capacity and advise various stakeholders, public and private, on how to access available funds and apply for calls for projects linked to the blue economy.

5) **Success stories.** Identify, promote and advertise regionally, successful maritime projects.

6) Voluntary sharing knowledge and experience to **increase the capacity** of the participating countries to analyse and organise human activities in marine areas in order to achieve common ecological, economic and social objectives. Promoting, through voluntary cooperation and where appropriate, the sustainable growth of maritime economies and regions.

## **Priority 2. Promote maritime entrepreneurship and clusters**

Added value could also be created by supporting businesses, especially SMEs, through networks and clusters. It could also be achieved by enhancing the liaison and cooperation between the research and scientific community - for instance in a network of joint projects - and the market. This will support innovation and knowledge transfer and stimulate synergies. Such initiatives aim to boost business ideas and projects with high return on investments across the region. This could be of particular interest to the private investors.

### **Actions:**

1) **Clusters.** Support existing maritime clusters, as well as new generation innovation clusters. This will improve the cooperation across the region and the implementation of the blue economy actions set in the Common Maritime Agenda.

2) Encourage **business hubs, business labs and accelerators**, as well as regular events for networking, matchmaking between businesses.

3) **Start-Ups.** Create, support and promote start-ups oriented towards the circular and blue economy in the Black Sea region.