



Sustainable Blue
Economy Partnership

Workshop Report: Blue Economy for a Sustainable Black Sea (BES_tBS)

Sustainable Blue Economy Partnership
Regional Workshop

Sofia, International Business School

17 October 2024, 9:00-17:00



Co-funded by
the European Union

EUROPEAN PARTNERSHIP

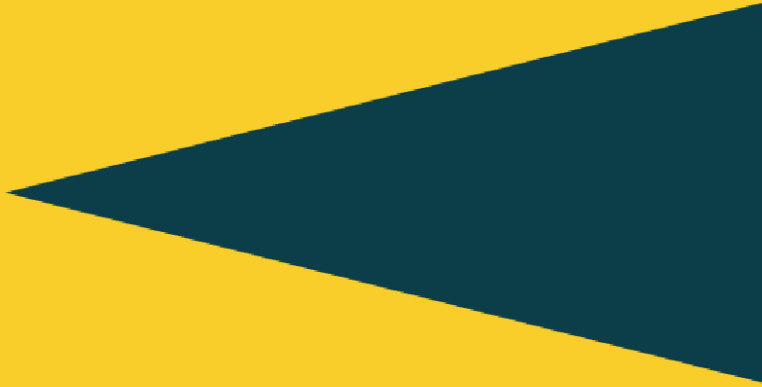


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1.0 WORKSHOP OUTLINE

1.1 Summary

On 17 October 2024, the Sustainable Blue Economy Partnership hosted the **'Blue Economy for a Sustainable Black Sea'** workshop in the premises of the International Business School in Sofia, Bulgaria. Stakeholders from across the Black Sea region came together to provide input to the Partnership about local needs, strengths, and priorities. The event took place back-to-back with the **Mission Ocean** event in Burgas and the **BRIDGE-BS High-Tech Summit for the Black Sea**, a research forum focused on ocean digitalisation and industry in the Black Sea region.

As part of a series of regional workshops across Europe's Sea basins, this event aimed to identify practices and regional needs relevant to the Partnership's Strategic Research and Innovation Agenda (SRIA). These regional workshops are finalised to help shape policy priorities from a local perspective, whilst staying within the broader, pan-European framework of the Partnership. The workshops are organised jointly by the Partnership's Brussels Office, which fosters community engagement around the Partnership, and the regional sea basin nodes that advise on strategic agendas and bridge the local and European levels, thereby creating synergies with key regional stakeholders.

The Black Sea workshop featured institutional speakers from the European Commission's DG Research & Innovation, DG Maritime Affairs and Fisheries, the Bulgarian government, and the Black Sea Commission, all of whom discussed policies and perspectives on regional and international scales. Representatives from research organisations also shared insights on aligning the Partnership's goals with the Black Sea's Strategic Research and Innovation Agenda. Industry representatives contributed perspectives on interlinking the blue economy with digital and green transitions and the role of business in applying project outcomes to the market.

The workshop comprised three panel discussions. The first panel showcased **three key projects**, including two funded by the Partnership's first co-funded call for proposals ([SEAREFINERY](#) and [WASTE2TASTE](#)) and a third project, MARSPLAN, financed by the European Maritime Fisheries Fund (EMFF). The creation of project portfolios, which the Partnership will organise, was highlighted as an effective way to avoid overlapping and foster synergies across the initiatives.

The second panel explored the importance of **synergies within the Black Sea region**, particularly supporting a Common Maritime Agenda and expanding international cooperation. A cross-basin dialogue session also included representatives from organisations in the Mediterranean Sea and the Baltic Sea, who provided valuable insights for collaboration. A roundtable discussion addressed the importance the Partnership attaches to bringing project

outcomes to the market by involving innovation and business communities. This session highlighted Black Sea leadership in digitalisation and sensitive technologies.

Finally, a **World Café session** provided an open forum for the participants to give input to the Partnership in terms of the specific needs, priorities and challenges facing the Black Sea.

1.2 Agenda














09:00	▶	Arrival and registration	
09:30	▶	<p><i>Welcome</i></p> <p>Moderator: Karina Angelieva, Strategies advisor for innovation and growth</p>	<p><i>Message from the European Commission, the Bulgarian authorities and the Black Sea Commission</i></p> <ul style="list-style-type: none"> • Irina Makarenko, Pollution Monitoring and Assessment Officer, Black Sea Commission • Elisabetta Balzi, Head of Unit Ocean, Seas and Waters, Deputy Director Healthy Planet at European Commission, DG Research and Innovation
10:00	▶	<p><i>Setting the scene/1: The Sustainable Blue Economy Partnership - opportunities for the Black Sea blue economy</i></p> <p>Moderator: Angiolo Boncompagni, Italian Ministry of Universities and Research (MUR)</p>	<p><i>The EU Sustainable Blue Economy Partnership, from the Strategic Research and Innovation Agenda to the Intervention Areas</i></p> <ul style="list-style-type: none"> • Frode Dal Fjeldavli, Research Council Norway (RCN), Partnership Brussels' Cellule, Norway <p><i>Synergies: opportunities from funding streamlining and the shared use of Research Infrastructures</i></p> <ul style="list-style-type: none"> • Viorel Vulturescu, Ministry of Research, Innovation and Digitalization (MCID), Vice Chair of the Partnership General Assembly, Romania
10:20	▶	<p><i>Setting the scene/2: The voice of the Partnership Black Sea Nodes</i></p> <p>Moderator: Milan Baltov, Burgas Free University (BFU), Bulgaria, Sustainable Blue Economy</p>	<p><i>Interconnecting the Sustainable Blue Economy Partnership and the Black Sea Strategic Research and Innovation Agendas</i></p> <ul style="list-style-type: none"> • Ebru Soyuyüce Aydın, Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye, • Jobava Rusudan, Shota Rustaveli National Science Foundation of Georgia (SRNSFG), Georgia, • Olena Marushevskya, Bluerivers, Sustainable Blue Economy Partnership Black Sea Node, Ukraine

Partnership Black
Sea Node

10:40	▶	<p><i>Panel discussion: Towards portfolios of projects</i></p> <p>Moderator: Mihaela Mirea, Black Sea Assistance Mechanism Coordinator</p>	<ul style="list-style-type: none"> • Zeynep Cetecioglu Gurol, Royal Institute of Technology (KTH), Sweden <i>Partnership cofunded project on 'Improved valorization of marine sources and processing waste for resource efficient blue food/feed and environmentally sustainable materials development - SEAREFINERY'</i> • Daniela Coppola, Stazione Zoologica Anton Dhorn (SZN), Italy <i>Partnership cofunded project on 'From waste to taste: exploring innovative food applications of postharvest fish losses – WASTE2TASTE'</i> • Dan Vasiliu, National Institute for Research and Development of Marine Geology and Geoecology (GEOECOMAR), Romania <i>Cross-Border MARitime Spatial PLANNing in the Black Sea - MARSPLAN</i>
Q&A with the audience			
11:10	▶	Coffee break	▶▶ ▶▶ ▶▶ ▶▶ ▶▶ ▶▶ ▶▶▶
11:40	▶	<p><i>Cross-basin dialogue: Intertwining the blue economy with the digital and green transition</i></p> <p>Moderator: Viorel Vulturescu, Ministry of Research, Innovation and Digitalization (MCID), Romania</p>	<ul style="list-style-type: none"> • <i>Mediterranean Sea</i> >> Manuela Scarsi, Port System Authority of North Tyrrhenian Sea, Italy • <i>Black Sea</i> >> Barış Salihoglu, Middle East Technical University (METU), Türkiye • <i>Baltic Sea</i> >> Maciej Zdanowicz, National Centre for Research and Development (NCBR), Poland <p style="text-align: center;">Q&A with the audience</p>
12:10	▶	<p><i>Roundtable - Sustainable Blue Economy Partnership perspective on how to uptake projects' results to the market: connecting with innovation and business players</i></p> <p>Moderator:</p>	<ul style="list-style-type: none"> • Şafak Özsoy, Director, TULIP Sustainability Center, Türkiye • Andreea Strachinescu, European Commission, Head of Unit, DG-MARE • Eleni Manousiadi, Kantor Management Consultants, The Black Sea Accelerator • Boyan Zhekov, National Horizon Europe coordinator, Bulgaria • Stela Atanasova, Bulgarian Ports Infrastructure Company (BPI Co.) <p style="text-align: center;">Q&A with the audience</p>

Report: Blue Economy for a Sustainable Black Sea (BEStBS)

Matteo Bocci,
Black Sea
Accelerator

13:00		<i>Showcase session (5' pitches): From research to market uptake: Lessons from Black Sea digitalization leadership</i>	<ul style="list-style-type: none">• Emre Yemişken, Tetis Biotechnology and Faculty of Science, Department of Biology at Istanbul University, Türkiye• Ivaylo Slavov, Finance Partner Entrepreneur and University board member of Burgas Free University
		Moderator: Black Sea Young Ambassador (Angela Goncear, Moldova)	
13:20		Networking lunch	      
14:20		World café: <i>Black Sea needs, priorities, and challenges</i>	Engagement of the audience by Julie Oliver, Project Management Jülich (FZJ), Germany, together with the Partnership Black Sea Partner and Nodes and the Black Sea Young Ambassador (Angela Goncear, Moldova)
15:20		<i>Panel discussion on synergies / 1: capitalizing on Black Sea networks for a Common Maritime Agenda</i>	<ul style="list-style-type: none">• Boryana Stancheva, Association of Danube River municipalities, ECOsystem-based governance with Danube lighthouse Living Lab for sustainable Innovation processes (EcoDaLLi), Bulgaria <i>From source to sink – the Mission Restore our Ocean and Waters in the Danubius region and Black Sea basin</i>• Pinar Uygurer, Middle East Technical University (METU), Project manager of Black Sea CONNECT and BRIDGE-BS, Türkiye <i>Linking the Common Maritime Agenda to Black Sea SRIA implementation</i>• Adrian Stanica, National Institute for Research and Development of Marine Geology and Geoecology (GEOECOMAR), Romania <i>How to 'open doors' (and infrastructures) for research and innovation in the Black Sea</i>
		Moderator: Mustafa Yucel, Middle East Technical University (METU), Türkiye	
		Q&A with the audience	
15:50		Comfort break	<ul style="list-style-type: none">• <i>Continuous coffee served</i>
16:00		<i>Panel discussion on synergies / 2: The international dimension</i>	<ul style="list-style-type: none">• Julian Popov, Advisor to the Ministry of Environment, Bulgaria <i>Outcomes of the last IPCC session</i>• Rositsa Stoeva, Executive Manager at the Permanent International Secretariat (PERMIS), Black Sea Economic Cooperation (BSEC)

*and the
Common
Maritime
Agenda*

Moderator:
Julie Oliver,
Project
Management
Jülich (FZJ),
Germany

Economic cooperation supporting the Common Maritime Agenda

- Stavros Kalognomos, Executive Secretary of the Balkan & Black Sea Commission (BBSC), Conference of Peripheral Maritime Regions (CPMR)

Engaging regional authorities for a sustainable blue economy

- Violeta Slabakova, Institute of Oceanology Varna, Bulgaria

The System of System (SoS) Results under the DOORS project - Developing Optimal and Open Research Support' for the Black Sea

Q&A with the audience

16:50	▶ <i>From insight to impact: Workshop takeaways and next steps</i>	Margherita Cappelletto, Italian Ministry of Universities and Research (MUR), Coordinator of the Partnership & Kathrine Angell-Hansen, Research Council Norway (RCN), Chair of the Partnership General Assembly
17:00	▶ End of the workshop	

1.3 Participants

131 people from 31 countries registered to the workshop, both in presence and on-line. Table 1 lists the number of participants from each country and Figure 1 gives an overview of their domains of activity.

Table 1: Participants from each country

Country	Participants
Bulgaria	39
Türkiye	19
Greece	9
Romania	8
Belgium	7
Georgia	6
Italy	5
Nigeria	3
Spain	3
Ukraine	3
Algeria	2
Bangladesh	2
Germany	2
Kenya	2
Latvia	2

Norway	2
Pakistan	2
Sweden	2
Croatia	1
France	1
Moldavia	1
Montenegro	1
Morocco	1
Netherlands	1
Poland	1
Portugal	1
Somalia	1
Tanzania	1
UK	1
USA	1
Sri Lanka	1

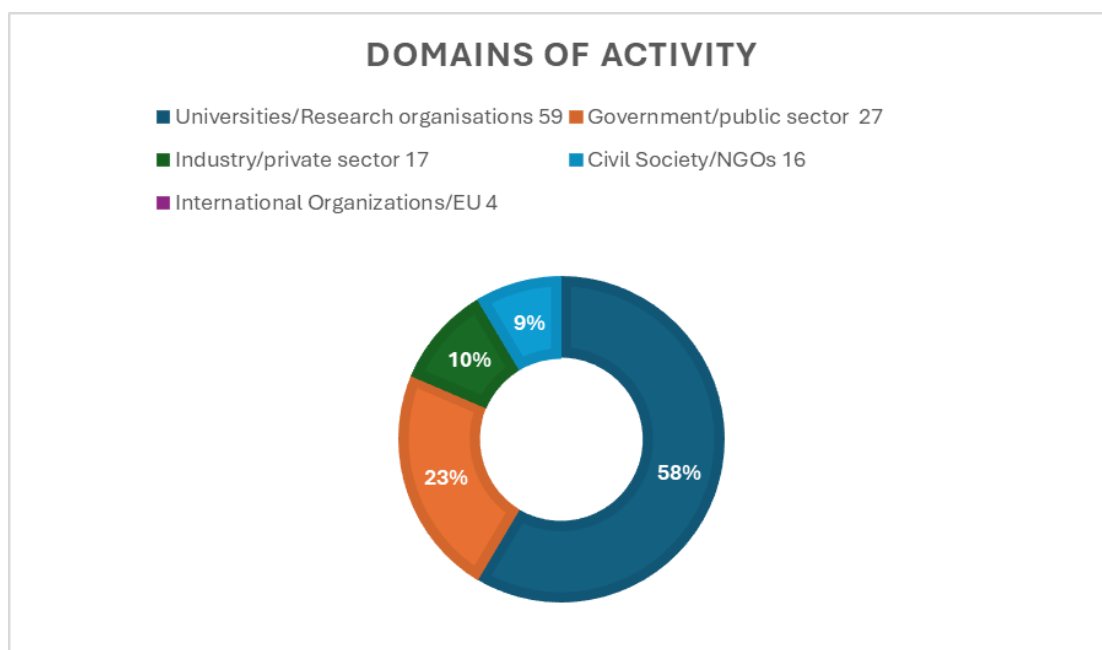


Figure 1: Domains of activity of participants to the workshop

2.0 OUTCOMES

2.1 Welcome

The welcome panel was introduced by **Karina Angelieva**, Strategies Advisor for Innovation and Growth and former Bulgarian Vice-Minister for Research and Innovation, who greeted the initiative, considering international cooperation an opportunity to increase knowledge and skills in the Black Sea region and encouraging regional stakeholders to apply in the Partnership's calls.

Iryna Makarenko, Pollution Monitoring and Assessment Officer at the Permanent Secretariat of the Black Sea Commission (BSC), noted the efforts made in the region to implement the blue economy policies in different sectors, also taking into account the current historical circumstances. The BSC is acting to complement further steps in the Common Maritime Agenda participating to a number of interconnected European and international initiatives demanding synergies and connectivity.

From her side, **Elisabetta Balzi**, Head of Unit Ocean, Seas and Waters, Deputy Director Healthy Planet at European Commission, DG Research and Innovation, highlighted the importance of the Sustainable Blue Economy Partnership as a EU funded research program with innovation impact and the need for an increased regional engagement in the Ocean community.

Finally, **Admiral Boyan Mednikarov**, Chairman of the Marine Scientific Society, on behalf of the Bulgarian marine scientists and industry community, thanked the initiative as a contribution to moderate ecological and economic risks in the Black Sea region and praised the strict cooperation between Bulgaria, Romania and Türkiye in participating to consortium coalitions.

2.2 Setting the scene 1: The Sustainable Blue Economy Partnership - opportunities for the Black Sea blue economy

Angiolo Boncompagni, Italian Ministry of Universities and Research (MUR) as moderator introduced the session dedicated to presenting the Partnership, highlighting at first how strategic the Black Sea is for the Partnership. Indeed, the workshop aims at meeting the regional needs, comparing them with the Strategic Agenda and Intervention Areas of the Partnership. It is important to share the idea that the Partnership operates as an instrument open to synergies and complementarities with other initiatives in this area.

The first speaker, **Frode Dal Fjeldavli from the Research Council of Norway (RCN)**, leads the Partnership Brussels Office, which is devoted to building the community around the Partnership. He set the scene by linking the Partnership's event to the Black Sea Summit held the day before, an opportunity to get to know the innovation ecosystem of the Basin. The Partnership aims to learn about and understand the strengths of the region while hearing from the community about their needs. This highlights the opportunity for cross-basin exchange within an integrated pan-European view. The ambition is to create the preconditions for transforming the blue economy by 2030.

The Partnership, with its evolving network of 29 countries and the European Commission, is a co-funded instrument designed to pool investments and align programmes. It places a strong emphasis on the sea-basin approach, addressing challenges, resources, and opportunities at the regional level so that the solutions developed will respond to local needs, building on the principle of place-based innovation. In this perspective, it is natural that the Strategic Agenda of the Partnership is aligned with that of the Black Sea. For this reason, the Partnership is equipped with sea-basin contact nodes for all sea basins and the Atlantic Ocean.

Responding to global challenges, the Partnership also works with international partner organisations such as the Organisation for Economic Co-operation and Development (OECD), the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) and the Group of Seven (G7).

The intervention logic of the Partnership involves co-creating knowledge produced by the partnership of Member States (MS) and Associated Countries (AC), identifying needs and objectives reflected in the impact-oriented intervention areas. These are translated into Joint Calls for proposals and Additional Activities (e.g., thematic annual programming, sharing research infrastructures, alignment of monitoring programmes, knowledge hub to support the European Ocean Observing System, development of a portfolio of thematic and regional projects) towards achieving societal impacts. Impact orientation means that the produced knowledge is taken up by the market to succeed in the green and digital transition. Actual solution-oriented intervention areas seem to fit the Black Sea agenda.

Stronger mobilisation of Black Sea stakeholders is needed at this stage, including in terms of participation to the joint calls and additional activities. The **input today will inform the design of the intervention areas** for future calls.

Synergies also include opportunities from funding streamlining and the shared use of research infrastructures, as pointed out by **Viorel Vulturescu from the Ministry of Research, Innovation and Digitalisation (MCID), Romania**, and Vice-Chair of the Partnership General Assembly. He added that *"we will work together for many years ahead with scientists, science administrators, and stakeholders working on the global ocean."* One of the most attractive concepts of the Partnership is the integration of the sea-basins across Europe, not in isolation, to share knowledge and solutions.

Three phases were followed: **understand, design, and act**. For instance, a desk analysis on common provision regulations has been performed at the European level, exploring ways to use EU national and regional funding streams. Information on Next Generation EU, the European Commission's economic recovery package, was analysed, and it was concluded that while many funding streams are available, there is little awareness around them, particularly in regional programs. Member States foresee investing in Horizon Europe Partnerships at the state and regional levels through different mechanisms and frameworks of cooperation for implementation. Guidelines were then drafted to operationally support Member States and regions, complemented by a practical dashboard as a tutorial supporting information exchange, including updates from the European Commission. Events devoted to exchanging practices also supported understanding how to leverage funding from different programmes (e.g., in Finland) or how to combine funds (e.g., in Italy).

Another challenge ahead relates to **sharing research infrastructures** representing strong investment asset by Member States that can be further valorised at the EU level, as the new Bulgarian research vessel demonstrates; knowledge needs to be shared with European teams working together in a sort of distributed network of infrastructures. An underlying methodology was developed, starting from a Call for Expressions of Interest to compose the infrastructure portfolio, followed by a call for access that will be launched soon, complementing the regular joint call for R&I projects. The Black Sea has an additional opportunity to show solidarity and willingness to do research together.

2.3 Setting the scene 2: The voice of the Partnership Black Sea Nodes

This panel was moderated by **Milen Baltov** from the Burgas Free University (BFU) in Bulgaria, who also represents the Black Sea node in the Sustainable Blue Economy Partnership. The discussion featured **Ebru Soyuyüce Aydın** from TÜBİTAK (Scientific and Technological Research Council of Türkiye), also representing Türkiye's involvement as a Black Sea node partner in the SBEP project. The other two Nodes from the Black Sea region **Jobava Rusudan** (Shota Rustaveli National Science Foundation of Georgia **SRNSFG**, Georgia) and **Olena Merkusheva (Bluerivers, Ukraine)**, were also connected online to the meeting.

Milen first asked Ebru about Türkiye's role in the Black Sea blue economy. Ebru outlined TÜBİTAK's key role as Türkiye's national funding agency, coordinating Horizon Europe programmes and fostering research partnerships. She pointed out that the 1004 programme's prioritisation of Blue Economy in 2024 demonstrates Türkiye's commitment to sustainable marine development. Additionally, she acknowledged the important contributions of Turkish institutions, including Orta Doğu Teknik Üniversitesi, which enhance collaboration and drive blue economy efforts in the region.

Ebru also provided an overview of the Turkish ministries actively involved in the Blue Economy:

- **Ministry of Environment** – Focused on pollution reduction, zero-waste strategies, and coastal monitoring to support marine ecosystem sustainability.
- **Ministry of Transport** – Working on greening maritime vessels, advancing sustainable transport, and coordinating regional efforts as the National Coordinator for the Common Maritime Agenda for the Black Sea.
- **Other Ministries** – The **Ministries of Tourism, Agriculture and Forestry, and Energy** are also engaged in blue economy activities, while the **Ministry of Foreign Affairs** manages transboundary collaborations.

Moreover, TÜBİTAK's Marine Research and Technology Group plays a significant role in supporting Blue Economy initiatives. Projects such as the Integrated Marine Pollution Monitoring Programme (DEN-İZ) and international collaborations like BRIDGE BS and GES4SEAS are enhancing regional cooperation and fostering an ecosystem-based management approach for the Black Sea.

Milen then asked Ebru about the primary challenges Türkiye faces in the blue economy. She highlighted the following key areas:

- **Coordination** – Aligning strategies across multiple ministries, particularly in environmental and maritime sectors, requires close coordination.
- **Capacity Building** – Strengthening public sector capacity through infrastructure, training, and staffing is essential to effectively implement regulations and support innovation.
- **Private Sector Investment** – Increasing investment in areas like maritime transport, renewable energy, and sustainable fisheries is crucial, with favourable policies and incentives required to attract private capital.

Ebru's insights underscored Türkiye's active role in shaping a sustainable blue economy in the Black Sea region. TÜBİTAK's leadership, inter-ministerial efforts, and partnerships with institutions like Orta Doğu Teknik Üniversitesi exemplify Türkiye's commitment to fostering collaborative and sustainable marine practices. Addressing challenges related to coordination, capacity, and investment will be pivotal in realising the full potential of the blue economy in the Black Sea.

2.4 Panel discussion: Towards portfolios of projects

The Partnership's co-funded projects represent the efficient connection between the funding opportunities and the needs identified in each sea basin and region. Although the innovation challenge is the main driver of each project proposal team, it is important to capitalise on the outcomes of successful projects and to focus on creatively adapting

solutions to the particularities of each area. The sustainable use of resources, including e.g. fisheries and aquaculture waste re-use considering the environmental impact and the cost, is a sector fully open for innovation and creativity. Maritime spatial planning (MSP) refers to the way we manage our seas according to the needs and challenges in each sea, and evolving MSP processes in the Black Sea are required now that the wind energy industry is putting pressure on the basin. Engaged stakeholders are supporting these new emerging businesses. The interventions explored the projects' main products and outcomes and what applications and uses are intended, as well as key challenges and potential solutions.

The moderator, **Mihaela Mirea**, coordinator of the Black Sea Assistance Mechanism, introduced the session by referring to projects as a bridge between the funding, the needs, and the ideas coming from stakeholders in the region. She stressed that although we always try to innovate coming up with new projects, we also need to capitalise on the results. In this regards, **Margherita Cappelletto** from the Italian Ministry of Universities and Research, and the Partnership's coordinator, introduced the **portfolio** plans of the Partnership as an action, led by France, to support clustering of different projects at **thematic and regional** level. Establishing portfolios by bringing together ongoing projects is a way to avoid overlapping and support synergies, critical mass, directionality and impact.

Zeynep Cetecioglu Gurol from the Royal Institute of Technology in Sweden presented the Partnership co-funded project **Searefinery** 'Improved valorisation of marine sources and processing waste for resource efficient blue food/feed and environmentally sustainable materials development'. The project aims at developing a bioprocess platform to produce food, feed, and packaging products from waste and sidestreams. By testing different extraction processes across five sea basins, they will be able to compare and establish which process is most cost efficient and sustainable. The potential of seaweed-derived compounds can advance industries beyond food and nutraceuticals. Cetecioglu Gurol stressed indeed that biomass should therefore be used for multiple purposes: we need food for an increasing population, for animal feed, and alternatives to plastic for packaging. To succeed, we need to change the mindset and the process. Lessons from the project could be applied across other projects that aim to maximise biomass yield and product value.

Daniela Coppola from the Stazione Zoologica Anton Dorn in Italy presented the Partnership co-funded project **Waste2Taste** 'From waste to taste: exploring innovative food applications of post-harvest fish losses'. The project explores the production of functional marine food ingredients, such as collagen, chitin/chitosan, and fish oil from post-harvest fish losses. The potential for scale-up is facilitated by the consortium, including two private companies, which are already in the market. Replication of solutions for commercial production in other regions can be also explored.

Dan Vasiliu from Geocomar in Romania presented the project **Marsplan** - Cross-Border MARitime Spatial PLANning in the Black Sea. The project is financed by the European Maritime Fisheries Fund (EMFF) and is a continuation of a previous project starting in 2015. The main aim is to support the implementation of the MSP Directive in the Black Sea region and support national authorities in developing MSP national plans. Vasiliu noted that the current plans have a waste management focus. Circular economy, climate change adaptation and mitigation, and pollution should be better reflected in future plans.

2.5 Cross-basin dialogue: Intertwining the blue economy with the digital and green transition

The dialogue was moderated by **Viorel Vulturescu** from the Ministry of Research, Innovation and Digitalization (MCID) in Romania and featured three panellists representing the Mediterranean, Black and the Baltic Sea basins.

Manuela Scarsi (Port System Authority of North Tyrrhenian Sea, Italy) first recalled that in the **Mediterranean** the bordering countries are predominantly non-EU and that there are substantial differences in culture, demographic growth and energy mix, with wars that have been going on for millennia. She underlined that this diversity is a value for the Mediterranean itself in terms of the blue economy, biodiversity, territorial resources, energy patterns and technologies. In this perspective, there is a strong need in the Mediterranean for dialogue, sharing best practices while respecting each one's roles and needs, with ports covering a new role ("expanded port authorities") as a bridge between research and the market towards the digital and ecological transition, while strengthening port-to-port cooperation to lead the way in these areas. The ECA4MED Knowledge Centre supports the creation of a **community of practice in the Mediterranean**, a collaborative network of individuals and organisations who share a common interest in reducing, up to net zero, maritime emissions and promoting sustainable practices, which is expanding to the Atlantic area, spreading wider stakeholder involvement, awareness raising and synergies with other sea basins. Furthermore, the challenges of digital and ecological transition require new partnerships, therefore complementarity between financing schemes and programs is necessary in supporting cooperation between various actors, at different territorial levels and at the various stages along the path of the coastal ecosystem, to supporting a competitive and sustainable blue economy across all sea basins.

For the **Black Sea**, **Barış Salihoglu** (Middle East Technical University (METU), Türkiye) mentioned the specificities, in terms of strengths and weaknesses, of the five intervention areas of the Partnership's annual joint transnational call. The region is the largest oxygen-free marine system on Earth with already under the adverse impact of multiple stressors such as warming, deoxygenation and overfishing. There is a need for more research on the effect of multiple stressors on the ecosystem and ecosystem service which are in fact

the very topics of the BRIDGE-BS project. Despite the status of the Black Sea, the regional collaboration stemming from the Common Maritime Agenda, and its scientific pillar, the **Black Sea SRIA and its Implementation Plan** are also strengths for the basin. According to the speaker, the Black Sea SRIA and the Implementation Plan and the actors and processes that paved the way are a unique opportunity for the region, demonstrating the impact of collaboration. There is a need to continue the efforts that proved successful and to think in a more holistic manner. The Danube River, the Black Sea and the Mediterranean Sea are all a part of one ocean and deeply interconnected, and so should be our efforts. As scientists, and as the BRIDGE-BS project, we commit to ensuring its continuation.

Maciej Zdanowicz (National Centre for Research and Development (NCBR), Poland) also indicated strengths and weaknesses in the **Baltic Sea**, with reference to the five intervention areas of the Partnership's annual joint transnational calls. The Baltic region is strongly supporting the sustainable development of its maritime economy, including the protection of marine ecosystems and the promotion of green technologies with examples such as marine biodiversity protection programmes and projects related to renewable marine energy sources (e.g. wind farms in the Baltic Sea). There is active participation in regional initiatives cooperating with other countries under the Partnership, such as JPI Oceans, CSA BlueMissionBANOS, BONUS, BANOS and the Three Seas Initiative. In this framework, the project 'Polish Involvement in the Black Sea Region: Security and Transport' has the objective to analysis Poland's engagement in the Black Sea region, with particular emphasis on security and transport aspects. The Baltic region mainly invests in the development of innovative marine technologies, such as water quality monitoring systems and purification technologies with the challenge to support start-ups and technology companies operating in the maritime economy sector. Educational programmes and social campaigns are also supported to increase awareness of the importance of sustainable maritime management, while cooperation with universities, research institutes and businesses promotes marine conservation research. Policies and regulations are implemented to protect the marine environment, in line with EU directives and international agreements, such as regulations regarding fisheries management or pollution reduction. This policy priorities of the Blue Economy Baltic regions are reflected in the five intervention areas of the Partnership's annual calls.

Opportunities for cooperation in creating synergies of mutual convenience with other sea basin regions are seen in the mutual exchange of experiences from partnerships and synergies of various programmes and policies, as well as in the stakeholder engagement in international and regional initiatives, such as the Blue Economy Baltic Forum in Sopot, Poland, scheduled for 28-30 April 2025. Among the regional activities, the BONUS programme and BANOS CSA were highlighted, widening country perspectives to achieve balanced engagement and highlighting the need for a broader approach in the European innovation ecosystem to achieve common goals of the blue economy. The aim is to study current practices and datasets in the Baltic and North Sea (BANOS) area to map the situation and create a baseline for a Monitoring Framework for Sustainable,

CarbonNeutral and Circular Blue Economy, necessary to study the progress towards the three specific objectives of the Baltic and North Sea Lighthouse: Net Zero Emissions to the Sea, Zero Carbon Aquaculture and Low-Emission and Comprehensive Use of Marine Space. In detail, based on the baseline study by Technopolis, the following sectors have been analysed in the BlueMissionBANOS project with focus on their carbon neutrality and circularity: Waterborne transport; ports and associated facilities; renewable 'blue' energy production and storage facilities; low trophic aquaculture.

2.6 Roundtable - Sustainable Blue Economy Partnership perspective on how to uptake projects' results to the market: connecting with innovation and business players

The moderator **Matteo Bocci** (Black Sea Accelerator) framed the session looking at the perspectives of finding the path from solutions to market, building on the outcomes of the Black Sea Summit of the day before. *"We saw today a number of innovative activities and projects supported by the Partnership, that have potentials for broader scalability and replication."* Similarly, the day before the workshop - during the High-Tech Summit organised by the BRIDGE-BS project - innovative solutions and technologies were showcased. There is therefore overall potential for Black Sea innovators, start-ups and SMEs to scale-up to a full commercialisation level. Yet, to get to that level, dedicated grants and funding (seed/pre-seed) are needed, so that companies/innovators can strengthen their business plans, move to higher Technology Readiness Levels (TRL) and demonstrate their full marketability, avoiding the so-called 'valley of death'. The session's expected outcomes are input for the Partnership on how to contribute to market uptake and support leadership on digitalisation and high-tech solutions.

The following two questions were addressed to all speakers:

- *Question 1: Do you recognise these challenges/opportunities?*
- *Question 2: How we can work together through the Partnership to really address these challenges/opportunities, including for example activating dedicated funding/grants (seeds/pre-seed), for start-ups and SMEs to be able to scale up their solution and access to market-based investments?*

Şafak Özsoy, Director of the TULIP Sustainability Center in Türkiye, highlighted two core prerequisites for success of sustainability and reaching the carbon neutrality target of 2050: innovative solutions and networking. In order to create a long-term healthy and productive marine and coastal ecosystems, the following aspects have to be taken into account:

- *Environmental protection, not only reducing pollution, but also conserving biodiversity, mitigating climate change impact*
- *Economic growth in key blue economy sectors*
- *Social inclusion, considering the human dimension*
- *Better financial instruments, as raised also at OECD level*
- *Policy and governance to robustly regulate and manage the blue economy*
- *Leveraging technology at hand, including e.g. using satellite monitoring for fisheries management, sustainable aquaculture and marine renewable energy*

She finally added that in terms of time framework, 25 years until 2050 is not enough to change the systems for the maritime energy in order to reach the net zero emission. However, important attempts are on-going supported by consistent investments such as in the UK, supporting projects deploying net zero emission technologies and bridging them with industry. Looking at the EU Blue Economy strategy to be followed by mid-term projects, the areas to focus on and comply with are:

- *Marine Protected Areas (MPAs) to protect ecosystem services*
- *Pollution, including plastic waste*
- *Climate change mitigation*
- *Sustainable fisheries*
- *Biodiversity conservation*

Andreea Strachinescu, Head of Unit of the European Commission's DG-MARE, highlighted the importance of creating communities for exchanging ideas, as the Partnership is doing. She encouraged projects to think from the outset: "what is the impact of what I do, and would an investor put money into this?". She presented the BlueInvest initiative, which since 2019 supports start-ups in reaching the market and provides technical assistance for more than 500 project pipelines by working with investors and companies. An Investor Report provided key insights, and highlighted sectors such as ocean energy, observation technology, aquaculture, and fisheries as areas attracting investor interest. Strachinescu presented sector distribution, country distribution, and success stories from BlueInvest. Beyond the accelerator and financial seed, it is important to look, beyond a specific region, at the global market. Regarding developments ahead, she referred to the upcoming European Ocean Pact announced by the Commission. The Mission Charter was also emphasised as a way of joining the community, learning and creating opportunities, as Strachinescu also stressed the importance of being actively part of several communities and networks to increase the visibility of the sea-basin. Companies can also capitalise on the European Investment Bank (EIB) and DG MARE's Blue Champions Initiative.

Eleni Manousiadi (Kantor Management Consultants, The Black Sea Accelerator) emphasised the need for dedicated access to funding and to investors, which is particularly difficult for early phase start-ups. The Black Sea Accelerator helps innovators

by focusing on specific sectors with good potential for scalability, such as nature-based solutions, renewable energy, aquaculture.

The Accelerator launches open calls for start-ups, SMEs or larger enterprises also beyond the Black Sea region providing the potential of entrepreneurs to extend their potential in the region. The projects DOORS and BRIDGE offered targeted mentorship as well as one-to-one support, helping with business planning, and access to national and international funding opportunities, tackling challenges connected to reaching higher TRL and commercialisation, thus maximising the impact. She said that collective effort is needed to unlock potential and create new public-private partnerships, also spanning across sea basins. For this, development of innovation hubs and cross-border funding is needed, leveraging Horizon Europe and Interreg together with local programmes.

Boyan Zhekov (National Horizon Europe coordinator, Bulgaria) addressed three main points revolving around the three keywords '**coordination-business-data**':

- *Bulgaria and Romania need to coordinate their approach to partnerships and initiatives to be more active in accessing in EU funding. The under-representation in EU-funded initiatives is not because companies and ideas are not good in the region, but they need to increase their capacity to take part in such initiatives, and to convey the opportunities of EU funds to local stakeholders as well as cross-fertilise results of EU projects and initiatives in the national business ecosystem.*
- *Business and research need to work together. Business needs solutions from science, while business brings a sense of urgency. Scientists, administration, business and investors need to learn to speak the same language.*
- *Data is the cheapest way to find solutions to problems. The Digital Twin of the Ocean (DTO), and the regional Black Sea and Danube area twin is therefore relevant.*

Stela Atanasova (Bulgarian Ports Infrastructure Company, BPI Co.) explained from the perspective of the port authority that they try to support all players in the logistics chain in decisions towards innovation and digitalisation. Among the elements for regional success she highlighted:

- *A clear policy environment is key for all players to become more sustainable;*
- *It is important to identify correct investment needs in order to transform them into working investments. Ports and other stakeholders therefore need to be at the table when relevant policies, such as energy transition policy, new fuels, etc, are decided to identify which investments to prioritise. Through cooperation we need to choose investments that bring added value to the people - ports can attract young people - city, state, since green investments are only of value if used. In this framework, reliable data is a powerful tool for connection and sound identification of needs.*

2.7 Showcase session (5' pitches)

The session on digitalisation and sensitive technologies was moderated by the Black Sea Young Ambassador **Angela Goncaer**, from Moldova introducing the speakers that addressed real cases and lessons.

On the benefit of the Black Sea leadership on digitalisation for market uptake, **Ivaylo Slavov**, DigitALL entrepreneur and University board member of Burgas, Bulgaria said that AI is playing a key role in any initiative and sector now. The underlying question is how to use AI as an instrument to be efficient, productive and support sustainable businesses. We need connectivity between the different players first to improve the digital infrastructure and support the blue economy ecosystem, and then to manage and exchange the data gathered. We also need to have the knowledge and the capacity to analyse the data if we are to use the knowledge to create approaches for improving sustainability and the involvement of the different parts of the ecosystem. Science connects, without borders. We now can connect real-time, making faster improvements. Digital leadership means using the opportunities the digital infrastructure and data analysis gives us to be fast in making decisions. For example, AI data analysis and AI-based tools can improve activities of various fishing (local) communities including how to connect and share best practices across Europe, how to present the data to get better results faster and more efficiently. Also, through the e-commerce platform the portfolio of their activities can be showcased.

Challenged by the moderator on incentives for sharing data, in particular from private companies, Slavov stressed that sharing sometimes gives much bigger competitive advantage than not sharing. Finally, he encouraged innovators to consider their objective - is it to make money, to produce knowledge, or to contribute to society?

Emre Yemişken, from Tetis Biotechnology and Faculty of Science, Department of Biology at Istanbul University whose mission is to transform marine byproduct into future solutions integrating green and AI tech in marine bio compounds, emphasised two major challenges:

- *Zero waste production*
- *Lack of integration of AI and digitalisation in green tech extraction*

Using green tech with AI analytics means cost reduction of experiment on marine compounds and higher yields for land manufacturing and industries, as well as reduced environmental pollution and enhanced ecosystem protection. The market gets sustainable traceable products and continuous feedback from the end customer.

Bringing such technologies into a small company or a start-up has some costs and digital instruments have to be tailored to the specific outcome of the business once they transition from pilot to production, thinking from the very beginning to the exit strategy.

In fact, the cost of integrating green technology and AI is related with the goal of the company, costs to create new biotech compound using AI will be very high, while they are lower for making trendy products and services.

2.8 World Café

The session was led by **Julie Olivier** (Research Center Jülich, Germany, Partnership Brussels Office), together with the Partnership Black Sea Partner and Nodes and the Black Sea Young Ambassador (**Angela Goncaer**, Moldova).

Following the introduction of the interactive format enabled by the World Café methodology, reflecting the co-creation processes at the core of the Partnership as well as the European democratic values, and fostering networking to build the community, **Milen Baltov** (Burgas Free University) provided a basis for inspiration into the discussion by informing about the newly formed European Alliance for islands, ports and coastal territories. EUNICoast brings together 13 partner universities as places for deep thinking, thoughtfulness and experimentation in order to create meaningful connections and communication between territories and communities, hence engaging students and academia for the blue economy.

2.8.1 Table “Research Infrastructures”

If you could access marine research infrastructures through the Partnership, what would be interested in?

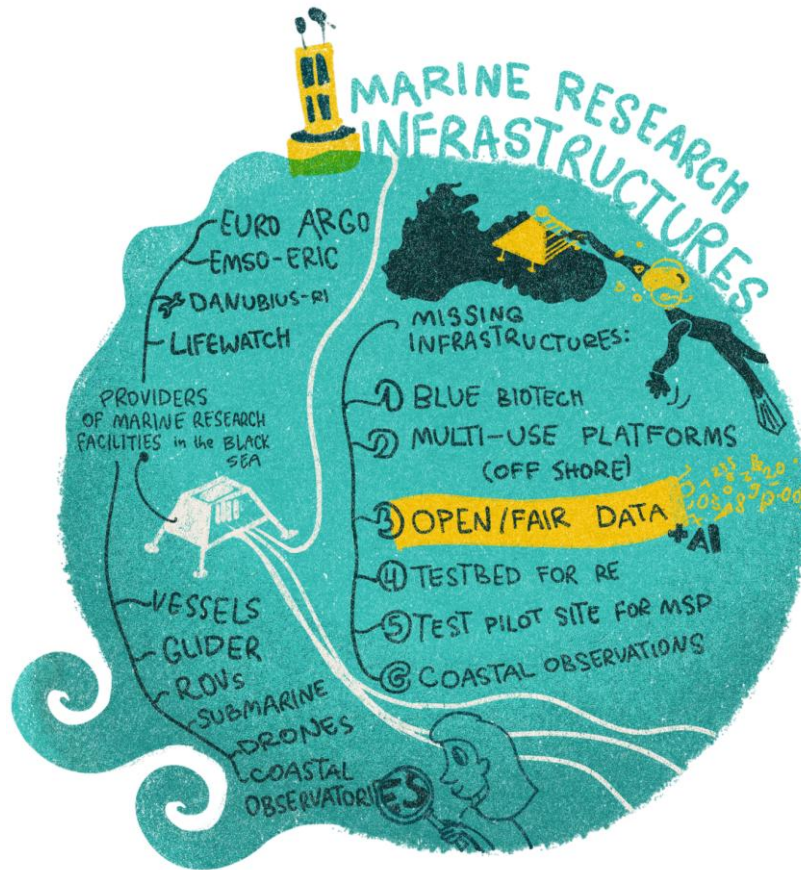


Figure 2: Infographic on key results of “Research Infrastructures” thematic table of the World Café (designed by Szofi Lang, 500 markers)

This table was moderated by **Irina Stanciu** (GEOECOMAR, Romania) with the support of **Margherita Cappelletto** (Ministry of Universities and Research, Italy, Partnership coordinator). GEOECOMAR engages in the new activity of the Partnership dedicated to sharing research infrastructures. She raised the main question for the group and interacted with the first group seeking answers regarding the types of marine research infrastructures, which of them exist in Black Sea basin, the providers of these facilities, which structures could become accessible through the Partnership, and obstacles to sharing infrastructures at the Partnership level and potential solutions.

Attendees listed existing marine research infrastructures in the Black Sea basin:

- ESFRI/ERIC: Euro-Argo ERIC provides satellite data (only BG as a full member of the Black Sea, RO/TR interested in participating); Emso-ERIC has off shore stations (RO, with offshore stations); DANUBIUS-RI provides the integrated knowledge to manage river-sea systems (RO general coordinator), LifeWatch as e-infrastructure for biodiversity and ecosystem research, and well-established collaboration with H2020 DOORS project (marine component, BG).
- Coastal Observatories: JERICO-RI provides operational service for the delivery of high-quality environmental data as physical, biogeochemical and biological.
- Other (not ESFRI): coastal observatories, research vessels (RO-BG-TR), gliders, a submarine (used also for outreach activities), drones, remotely automated

vehicles (ROVs) or autonomous underwater vehicles (AUVs), Drones (Bulgaria, Romania, Türkiye, Ukraine).

- Biological data collection
- Satellite data



Figure 3: Irina Stanciu (GeoEcoMar, Romania) and Margherita Cappelletto (MUR, Italy) facilitating one of the table of the World Café

In addition, a gap analysis for research infrastructures in the Black Sea basin contributed to identify needs for sharing research infrastructures with partners from other sea basins covered by the Partnership:

- Multi-use coastal platforms,
- Blue biotechnology
- Open/fair data and Artificial Intelligence (at national level)
- Infra/Data for Fisheries that is covered partly by the General Fisheries Commission for the Mediterranean (GFCM)
- Test pilot site for maritime spatial planning
- Test pilot site for multi-use such as robotics, underwater automated systems
- Coastal observatories
- Common observatories
- Planning of observations and coordinating the observation systems
- Test bed (e.g. in ports)

Identification of obstacles for sharing research infrastructures at the Partnership's level:

Report: Blue Economy for a Sustainable Black Sea (BESTBS)

- There is still a disentanglement between the providers and users of the sea community, including on terminology and awareness of what a research infrastructure does.
- There is no sound planning of observation nor a coordination mechanism such as a BS-GOOS (e.g. countries do not fully join EuroGOOS)



Figure 4: Interactive dialogue with participants during the World Café session

- Gap identification on the need to find ways for the information on the Black Sea research vessels (e.g. RO Mare Nigrum being just an example) schedule to be made available for the interested research institutes / organisations so that they could apply for a vacant spot of a specific cruise in order to perform back-to-back measurements.

As for other cooperation initiatives related to research infrastructures and sustained ocean observing systems with which the Black Sea community is involved, the participants mentioned the BRIDGE project but in relation to the attempt of filling the data gap.



Figure 5: Irina Stanciu (GeoEcoMar, Romania) presenting the results of the “Research Infrastructures” thematic table

Finally, the following research infrastructures were identified as particularly relevant for blue economy priorities in the Black Sea:

- Intercalibration for AZA = Allocated Zone for Aquaculture (upon approval of management plans)
- Test pilot sites for MSP
- Test bed for renewable energies
- Step towards the development of the DTO

All in all, the discussion highlighted that the added value of sharing research infrastructures is the cross-basins' collaboration offered by such a framework for action.

2.8.2 Table “Black Sea Opportunities”

Which specific challenges are priorities for the blue economy in the Black Sea and how do you wish that the Partnership could address them?

This table was moderated by Prof. **Milen Baltov** (Burgas Free University, Bulgaria), who is Partnership's Black Sea Node, with the support of **Angiolo Boncompagni** (Ministry of Universities and Research, Italy, Partnership's Brussels Office). He mentioned expected outcomes of this group and sought the answers for Black Sea opportunities.

- Participants emphasised the gap in Digital Twin Ocean technologies (DTO). They mentioned that fragmented observations create a gap and that better coordination at regional and national levels is required.
- Biotechnology and aquaculture were identified as opportunities for the Black Sea basin, as well as carbon sequestration capacities.
- On the other hand, digital tools were addressed in relation to sustainable fisheries and the circular economy in maritime sector and multi-trophic aquaculture.
- The political role of the Black Sea Economic Cooperation was emphasised regarding the promotion of the Common Maritime Agenda, and to foster cooperation in marine protected areas, establish dedicated funding for the Black Sea and empower coastal regions.
- The role of regions was emphasised together with the potential of Smart Specialisation Strategies for the blue economy.



Figure 6: Infographic on key results of “Black Sea Opportunities” thematic table of the World Café (designed by Szofi Lang, 500 markers)



Figure 7: Milen Baltov (BFU, Bulgaria) and Angiolo Boncompagni (MUR, Italy) facilitating “Black Sea Opportunities” thematic tables



Figure 8: Milen Baltov (BFU, Bulgaria) presenting the results of the “Black Sea Opportunities” thematic table

2.8.3 Table “Black Sea Community”

How could the Partnership leverage the engagement of the Black Sea communities to promote a sustainable blue economy?

This table was dedicated to engagement of Black Sea community and moderated by **Angela Gonciar**, one of the young ambassadors from BRIDGE-Black Sea Project, with the support of **Frode Del Fjeldavli** (Research Council of Norway, Partnership's co-coordinator).

It was stated that the Partnership could serve as an important bridge between high schools, universities, and the private sector due to its rich diversity. Besides an emphasis on citizen science and ocean literacy, the need to share best practice with other sea basins and to attract excellence were addressed. The following ideas were brought to the table:

- Activities such as training, workshops, competitions (e.g. photo competition) and hackathons can facilitate interaction.
- Start-ups in the blue economy community can also be engaged through the technological week in Batumi (StemSea). Impact hubs/accelerator programmes are useful to take ideas further.
- Thinking long-term, the active outreach to universities presents opportunities. Physical meetings contribute to building the knowledge of opportunities among both students and professors.
- Linking students/researchers from different types of universities enables interaction between the business and the scientific field and leads to new project ideas (idea labs). Bringing the blue economy into practical studies, e.g. at high school level facilitates linking the academic and practical approaches.
- Generally speaking, the need for simplification to enable involvement was addressed.
- Awareness championships could be organised and those activities in line with traditions could be planned. Such awareness activities enable us to look at how to promote traditional activities and culture, and to integrate new technologies into traditional practices.
- Not only young people, including children (“think big: Take children on board”) but also middle-aged and senior individuals should be included in citizen-focused activities. Therefore, retired or close-to-retire people in citizen science and training activities should also be engaged.
- Portfolios of projects should try to cover all IAs, not only aquaculture and fisheries. Coastal tourism is also very relevant, but it is not so clear that it belongs in IA5 (it can be difficult to categorise a project, as it often covers multiple thematic areas.)
- The need to address innovative tourism and eco-tourism was addressed.
- The EUNICoast is a good example of an alliance of schools across regions.



Figure 9: Infographic on “Black Sea Communities” thematic table of the World Café (designed by Szofi Lang, 500 markers)



Figure 10: Angela Gonciar (young ambassadors from BRIDGE-Black Sea Project) facilitating the “Black Sea Community” thematic table



Figure 11: Frode Del Fjeldavli (RCN, Norway) facilitating the interactive dialogue with participants

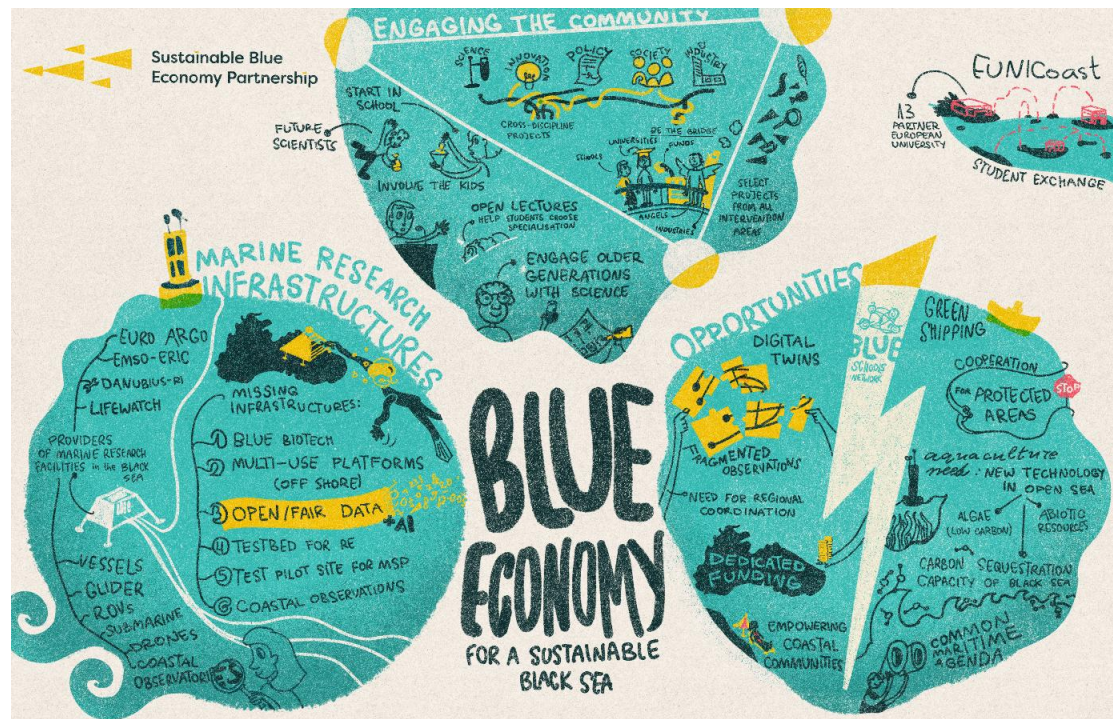


Figure 12: Infographic on “Black Sea Communities” thematic table of the World Café (designed by Szofi Lang, 500 markers)

Reflecting the democratic and co-design processes at the core of the Partnership’s institutional setup, the World Café fostered the exchange of ideas and good practices between participants. By gathering a variety of perspectives from experts and non-experts, it also promoted the acquisition of new information on aspects not considered before such as the engagement of senior generations on science.

2.9 Panel discussion on synergies 1/ Capitalising on Black Sea networks for a Common Maritime Agenda

Mustafa Yucel (Middle East Technical University METU, Türkiye) moderated the panel discussion on how capitalising regional networks for a Common Maritime Agenda.

Boryana Stancheva (Association of Danube River municipalities, ECOSystem-based governance with Danube lighthouse Living Lab for sustainable Innovation processes, EcoDaLLi) presented the “From source to sink – the Mission Restore our Ocean and Waters in the Danubius region and Black Sea basin”. She described the EU-funded EcoDaLLi project (CSA Lighthouse for Mission Ocean in the Danube) as a multi stakeholder consortium of 17 partners aiming to ensure the governance of the structures of the Danube basin (freshwaters) and its Delta through innovative solutions for ecological restoration, protection and preservation. The project supports the creation of an innovation ecosystem, and a digital portal linked to the Mission Implementation Platform, delivering innovative solutions and tools for ecosystem services. This will contribute to the Green Deal goal of decarbonisation for cleaner water, improved environment, and job creation in sensitive areas. A systemic approach to policies, to foster ecosystem in the Danube supporting innovators, provides a platform for cross specialisation of tools and bridges the communication between existing structures in the area.

For **Pinar Uygurer** (Middle East Technical University METU, Türkiye, Project manager of Black Sea CONNECT and BRIDGE-BS Linking the Common Maritime Agenda to Black Sea SRIA implementation), regional capacity building innovative needs are indicated in a whole pillar of the Black Sea SRIAs. Indeed, BS Connect and BRIDGE realised a series of achievements, like the BS Young Ambassador programme, launched four years ago by former European Commissioner Maria Gabriel. Under BRIDGE, twelve PhDs are working on the regional topics and a summer school on biotechnology with a virtual blue career centre, and a winter school for young diplomats were realised. In conclusion, we need innovative efforts to train young people on ocean skills.

Adrian Stanica (National Institute for Research and Development of Marine Geology and Geoecology GEOECOMAR, Romania) was asked on how to 'open doors' (and infrastructures) for research and innovation in the Black Sea. He reported that Europe offers a significant number of opportunities, which are unfortunately less known in the Black Sea area – including also the Lower Danube. The European Research Infrastructure Consortia (ERICs) are among these major opportunities. ERICs and European networks of Research Infrastructures give access to High Tech services, including access to observation and analysis facilities and services, as well as access to open and fair data. The Black Sea is less open to these initiatives with the exception of EMSO ERIC (Romania), EURO ARGO in Bulgaria and ARGO in Turkey. Another major initiative – DANUBIUS-RI - future ERIC dedicated to interdisciplinary science of River-Sea Systems is just about to start. DOORS

project brings together these and LIFEWATCH and EMBRC ERICs – to offer their combined services to support Black Sea research.

Opening doors may happen in two ways; the most sound is to have governments adhering to existing or future ERICs as international organisations, meaning full access to all services and facilities. The second way – for individual scientists with great ideas – is the participation in Transnational Access Exercises launched by ERICs where the excellent scientific idea is relevant. In this way, as well as collaboration with EMODNET and SeaDataNet, means adhering to principles of open and fair data for the marine community in the Black Sea. European Research Infrastructures are also innovation hubs, supporting collaboration with industry and providing high quality services with well-established set of rules.

2.10 Panel discussion on synergies 2/ International dimension and the Common Maritime Agenda

The final session addressed the implementation of the Common Maritime Agenda for the Black Sea within its global dimension. Stressing the value of international cooperation to achieve a sustainable blue economy in the Black Sea, **Julie Olivier** (Project Management Jülich, Germany, Partnership's Brussels Office) introduced the Partnership's work on enhancing cross-border collaboration with the co-branding of its co-funded projects by the UN Ocean Decade and within the UN Ocean Decade Programme on Sustainable Ocean Planning. Referring to the Partnership's workshop at the European Maritime Day 2024, she also underlined that the sea-basin approach is the most appropriate scale of collaborative action to achieve the blue green transformation.

Rositsa Stoeva (Executive Manager at the Permanent International Secretariat (PERMIS) of the Organisation of the Black Sea Economic Cooperation (BSEC)) promoted a project-oriented approach towards the achievement of prosperity in the wider Black Sea region:

- *As a common denominator for Black Sea stakeholders, the blue economy can be leveraged to achieve prosperity in the wider Black Sea region.*
- *The Common Maritime Agenda is an important milestone which the BSEC contributed to and which created ownership. After this framework document was endorsed, there was the pandemics and then Russia's invasion of Ukraine. "We have the common ground. In spite of the difficulties, we must think about the future: we have to find a way for long-term perspective in the Black Sea."*
- *The Sustainable Blue Economy Partnership and BRIDGE-Black Sea are good examples of the way forward to restore trust with project-oriented action, as well as: BLACK SEA CRUISE, Blueing the Black Sea Programme, REST-COAST, TOURAL...*
- *For more than thirty years, the BSEC has been a vehicle of mutual understanding, acting as a first level confidence building mechanism in the Black Sea wider region.*
- *Engagement of Moldova on a proactive basis.*

- *The Partnership should address challenges related to the ongoing war and promote more support to enhance the resilience of the Black Sea communities, e.g. mine cleaning and the achievement of good environmental status.*

Violeta Slabakova (Institute of Oceanology in Varna, Bulgaria, field of ocean technology), introduced the **DOORS project** (Developing Optimal and Open Research Support) as a good practice example from the Black Sea on how to drive evidence-based management of marine and coastal ecosystems across borders:

- *DOORS implements a System of Systems (SoS) platform for the Black Sea, providing a one-stop-shop for standardised data and model outputs to drive evidence-based knowledge development. By building a collective understanding of the Black Sea, the SoS supports knowledge transfer, as well as innovation and enterprise across blue growth sectors for a sustainable Black Sea region.*
- *A series of use cases co-developed with key stakeholders provided intelligence on the state of the Black Sea (fragile recovery, physical, chemical and biological aspects); threats to its status and coastal environment due to climate change and climate extremes. Bringing environmental and socio-economic data into a single portal also facilitates the opportunities for optioneering (what are the different blue growth opportunities) and optimisation (where are they best placed) for a sustainable blue economy. Therefore, the SOS also serves as a blue growth accelerator through the identification of blue growth opportunities in coastal environments:*

- *Assessment of the best location for the fixing of platforms for offshore energy (including both floating and fixed platforms, taking account of MSP, wave energy and storminess, bathymetry, etc.).*
- *Heritage and tourism: access to marine and coastal heritage, sea state and water quality, temperature, marine litter, and coastal erosion, habitat and biodiversity data can help identify opportunities and challenges that need to be addressed for sustainable tourism and investment in the wealth of coastal heritage.*
- *Ports and shipping: access to sea state, water quality, sediment inflow and coastal dynamics, for managing and optimising dredging to maintain navigation.*
- *Aquaculture: taking account of water quality, food supply including phytoplankton, bathymetry, temperature, etc.*

- *However, driving R&I forward fundamentally requires the development of new partnerships within and beyond the region, openness to data sharing and the opportunity to demonstrate the value of blue economy opportunities to seek further inward investment into the region.*
- *As a member of the EU expert group on Ocean Observations, Violeta also emphasised the need to develop the coordination of observing and monitoring*

systems. Ocean observation should be driven by user needs. Stronger cooperation can lead to more efficient observing capacities.

Stavros Kalognomos (Executive Secretary of the Balkan and Black Sea Commission (BBSC), Conference of Peripheral Maritime Regions (CPMR)) promoted a multi-stakeholder approach of ocean governance through the involvement of regional authorities.

- *As an association of regions across European sea basins, the CPMR is a key interlocutor of the European Commission, especially DG MARE and DG REGIO for policy development and implementation. The CPMR works with pioneering regions across sea basins, on a wide array of topics, including strategic research and innovation.*
 - *The CPMR promotes the blue dimension of Smart Specialisation Strategies (S3) and supports regions in boosting interregional cooperation in this key area, in collaboration with DG MARE under the S3 thematic platform for sustainable blue economy. This notably includes two relevant partnerships, on circular smart aquaculture coordinated by the Region Hauts-de-France (FR) and the partnership on MSBB co-ordinated by the Region of Emilia-Romagna (IT), which is a very active member of the BBSC.*
-
- *Through multi-stakeholder engagement, the Regional Authorities can anticipate the calls for funding and engage with the Mission “Restore our Ocean and Waters”. “They have a say, and they should be heard even though their engagement varies regarding the level of decentralisation of the different countries in the region”. The Danube and Black Sea Pilot Stakeholder Assembly, to be held in the framework of the PREP4BLUE Project, in November 2024, in Batumi (Ajara Autonomous Republic, Georgia) will showcase the role of research and innovation for the preservation and restoration of marine ecosystems and biodiversity in the Danube Delta and the Black Sea.*
 - *Priorities to be addressed by the Partnership in the Black Sea: Offshore and wind energy, aquaculture, invasive species, sustainable tourism (sustainable tourism growth in EU rural and remote areas is the objective of the TOURAL Project).*
 - *As a think tank and a lobby organisation, the CPMR has been holding the secretariat of the Seas, Rivers, Islands & Coastal Areas (SEArICA) Intergroup of the European Parliament, which has been a dynamic forum at European level, discussing and trying to influence EU policies for the benefit of Regional and Local Authorities, coastal communities, and relevant stakeholders. Following the European elections, the CPMR is working on the renewal of the SEArICA Intergroup, also targeting the involvement of Bulgarian and Romanian MEPs.*

- *The launch of the Black Sea SRIA Implementation Plan was kindly hosted by MEP Marian-Jean Marinescu, SEArca member (2020-2024 mandate) at the European Parliament, in Brussels, in May 2023¹. This conference contributed to promoting pan-European visibility for the Black Sea.*

2.11 Forward looking conclusions: opportunities from the Sustainable Blue Economy Partnership

Margherita Cappelletto, Italian Ministry of Universities and Research (MUR), Coordinator of the Partnership and **Kathrine Angell-Hansen**, Research Council Norway (RCN), Chair of the Partnership General Assembly, closed the meeting by thanking the host, all organisers, and contributors, wishing all the best for the upcoming celebration of the Black Sea Day. They emphasised the importance of joining efforts with ongoing initiatives in the regions and noted that the role of the Partnership's contact nodes, whose engagement was crucial in co-designing the event agenda, is being increasingly recognised.

Among the key takeaways: the Partnership can pilot meaningful initiatives by utilising infrastructures, stimulating the involvement of countries in the infrastructure system, and leveraging synergies and international cooperation to target regional innovation funds. Angell-Hansen conveyed a message from Elisabetta Balzi (EC-RTD), highlighting the need to raise awareness about funding mechanisms available for universities. She continued by raising the need to work hard to understand what is happening in the Basin. The rich audience and discussions highlighted that traceability, transparency, and trust take time. We cannot afford to overlook the good work that has been achieved in bringing the sea-basins together so far.

The European Commission has worked hard to ensure the ocean is prioritised at the policy and governance level. Now Missions and Partnerships, a strong Maritime Policy by DG-MARE are in place, and regions are contributing with enormous potential. In this regard, smart specialisation needs to be on the radar, given the potential of S3 strategies to generate speed, direction, and critical mass, a topic of interest from the regional perspective as well. To further strengthen this, collaboration with industry has to be enhanced so that our narrative aligns with their needs. The Black Sea has much to offer, particularly in the area of Digital Twins, where it is very advanced.

¹ <https://www.searica.eu/previous-mandates/2020-2024/events-2019-2024/launch-of-the-black-sea-sria-implementation-plan-what-is-next-for-the-black-sea-research-and-innovation-cooperation>

On the innovation side, we need to work with projects ensuring that impact and exit strategies are duly considered, as well plans towards market entry, and public procurement. For this reason, the Partnership also collaborates with BlueInvest, which among other things offers training to projects for pitching, understanding market needs and adapting the developed solutions where relevant.

2.12 Next steps/Recommendations in the light of evolving Intervention Areas

	<i>Main takeaways...</i>	<i>...to feed into:</i>
<i>Session – Setting the scene</i>	<p>Primary challenges in Blue Economy:</p> <p>Coordination: Aligning strategies across multiple ministries, particularly in environmental and maritime sectors, requires close coordination.</p> <p>Capacity Building: Strengthening public sector capacity through infrastructure, training, and staffing is essential to effectively implement regulations and support innovation.</p> <p>Private Sector Investment: Increasing investment in areas like maritime transport, renewable energy, and sustainable fisheries is crucial, with favorable policies and incentives required to attract private capital.</p>	=>WP2, WP7
<i>Panel discussion on Towards portfolios of projects</i>	<p>Sustainable use of resources, including fisheries and aquaculture waste re-use considering the environmental impact and the cost, is a sector fully open for innovation and creativity.</p> <p>Maritime spatial planning is the way to manage seas according to the needs and challenges in each sea.</p> <p>In the BS, the wind energy industry is putting pressure on the Basin.</p> <p>Searefinery - Improved valorisation of marine sources and processing waste for resource efficient blue food/feed and environmentally sustainable materials development' aims at developing a bioprocess platform to produce food, feed, and packaging products from waste and sidestreams by testing different extractions across five sea basins.</p> <p>Waste2Taste – 'From waste to taste: exploring innovative food applications of post-harvest fish losses' explores the production of functional marine food ingredients, such as collagen, chitin/chitosan, and fish oil from post-harvest fish losses.</p>	=>WP2, WP4

	<p>Marsplan - Cross-Border MARitime Spatial PLANning in the Black Sea aims to support the implementation of the MSP Directive in the BS region and support national authorities in developing MSP national plans.</p>	
<p><i>Cross-basin dialogue: Intertwining the blue economy with the digital and green transition</i></p>	<p>Need for more research on ecosystems synergies with the Mediterranean, especially the effect of climate change on diversity and the effect of the oxygenation and pollution. Danube, Black Sea, Mediterranean are all a part of one ocean.</p> <p>The Baltic supports protection of marine ecosystems and promotion of green technologies (e.g. marine biodiversity protection, renewable marine energy sources) and invests in development of innovative marine technologies, such as water quality monitoring systems and purification technologies.</p> <p>Cooperation with universities, research and businesses promotes marine conservation research. Policies and regulations are implemented on fisheries management or pollution reduction.</p> <p>3 objectives of the BANOS Lighthouse: Net Zero Emissions to the Sea, Zero Carbon Aquaculture and Low-Emission and Comprehensive Use of Marine Space. Sectors analysed: Waterborne transport; ports and associated facilities; renewable 'blue' energy production and storage facilities; low trophic aquaculture.</p>	<p>=>WP2, WP6,</p>
<p><i>Roundtable on Sustainable Blue Economy Partnership perspective on how to uptake projects' results to the market: connecting with innovation and business players</i></p>	<p>The potential for Black Sea innovators, start-ups and SMEs to scale-up to a full commercialisation level needs to be exploited, including with support of grants</p> <p>Prerequisites for success: innovative solutions and networking.</p> <p>Important to support track records of investment project pipelines (so to connect those to industries and investors).</p> <p>Priorities: protecting ecosystem services; pollution, including plastic waste; climate change mitigation; sustainable fisheries and biodiversity conservation.</p> <p>Lack of mid-term focus areas with development potentials (ecosystem services, MPAs, address plastic/pollution).</p> <p>BlueInvest Investor Report highlights ocean energy, observation, aquaculture, and fisheries to attract investor interest.</p>	<p>=>WP7, WP2, WP6</p>

	<p>The upcoming European Ocean Pact and the Mission Charter Danube Black Sea are ways of joining the community and networks.</p> <p>It is important to capitalise on the Blue Champions initiative by EIB and DG MARE.</p> <p>The BS Accelerator helps in accessing funding and investors by focusing on specific sectors with good as renewable energy, aquaculture.</p> <p>BG and RO under-representation in EU-funded initiatives: increase their capacity to convey opportunities.</p> <p>Business and research need to work together. Data and the digital twin is the cheapest way to find solutions to problems.</p> <p>Identification of correct investment needs in order to transform them into working investments.</p> <p>(From the perspective of the port authority) A clear co-designed policy environment is essential to efficiently invest.</p> <p>Awareness raising towards businesses of scientific results to be enhanced.</p> <p>Important to co-develop common language and mutual understanding amongst actors at different levels.</p> <p>Development of innovation hubs and cross-border funding is needed, through leveraging Horizon Europe and Interreg.</p>	<p>=>WP5</p> <p>=>WP8 – Task8.1</p>
<p><i>Showcase session (pitchces)</i></p>	<p>AI in support of sustainable businesses. Improvement of digital infrastructure.</p> <p>Sharing data by private companies and businesses gives competitive advantage.</p> <p>Zero waste production.</p> <p>Lack of integration of AI and digitalisation in green tech extraction.</p> <p>Start-ups need to think since the very beginning to the exit strategy, including integration of digital tools.</p>	<p>=>WP2, Task 8.5</p> <p>=>WP4, Task 7.4</p>
<p><i>World cafe</i></p>	<p>Table “Sharing research infrastructures” (Opportunities and obstacles for sharing research infrastructures; Data and monitoring gaps)</p> <p>Table “Engaging the Black Sea Community” (portfolios of projects, ocean literacy, capacity building, outreach to academia, senior generations, eco-tourism)</p> <p>Table “Black Sea Opportunities” (DTO, carbon sequestration, better ocean observation, cooperation with regional organisation and regions)</p>	<p>=> Task 8.4, 8.3</p> <p>=>WP4, WP5, WP7</p> <p>=> WP2, 8.3, 8.5, WP6</p>

	Need to simplify	=> WP6
<i>Synergy panel on capitalising on Black Sea networks for a Common Maritime Agenda</i>	Best practices: <ul style="list-style-type: none"> - EcoDaLLi portal for innovation systems - Capacity building initiatives in innovation (research, literacy). - ESFRIs 	=> WP8
<i>Synergy panel on international dimension and the Common Maritime Agenda</i>	Uptake of R&I opportunities: (Offshore and wind energy, aquaculture), Invasive species, sustainable tourism including heritage, mine cleaning, ports, dredging , (and achievement of Good environmental status).	=> WP 2, WP3
	Engagement of Moldova	=>Task 1.3 <i>Internationalisation roadmap</i>
	Renewal of SEARICA	=> WP6 Brussels Office
	Needs for coordination of observing and monitoring systems driven by user needs	=>Task 8.5, 8.3
	Multi-level governance for policy implementation with engagement of regions through CPMR and promotion of S3	=> WP 6, Task 8.1
	Project-based approach and positive visibility for the Black Sea	=> WP5 promoting engagement of BS stakeholders in calls and activities

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