Developing Optimal and Open Research Support for the Black Sea

Blue transitions in the Black Sea: Multi-Actor Forums to Advance a Sustainable Blue Economy

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Sustainable Development Unit, Athena RC

Image: @ngilfanov

DOORS - Developing Optimal and Open Research Support for the Black Sea
Project funded by the European Union N° 101000518

Timeline

Jun 2017

DG RTD begins development
of the Strategic Research and Innovation Agenda for the Black Sea (SRIA)

May 2018

Burgas Vision Paper
states need for SRIA with H2020 call for implementation in January 2019

May 2019

BD offically Launches SRIA
with DG RTD BG11 call for the Implementation of the SRIA in Sept 2019

Jan 2020

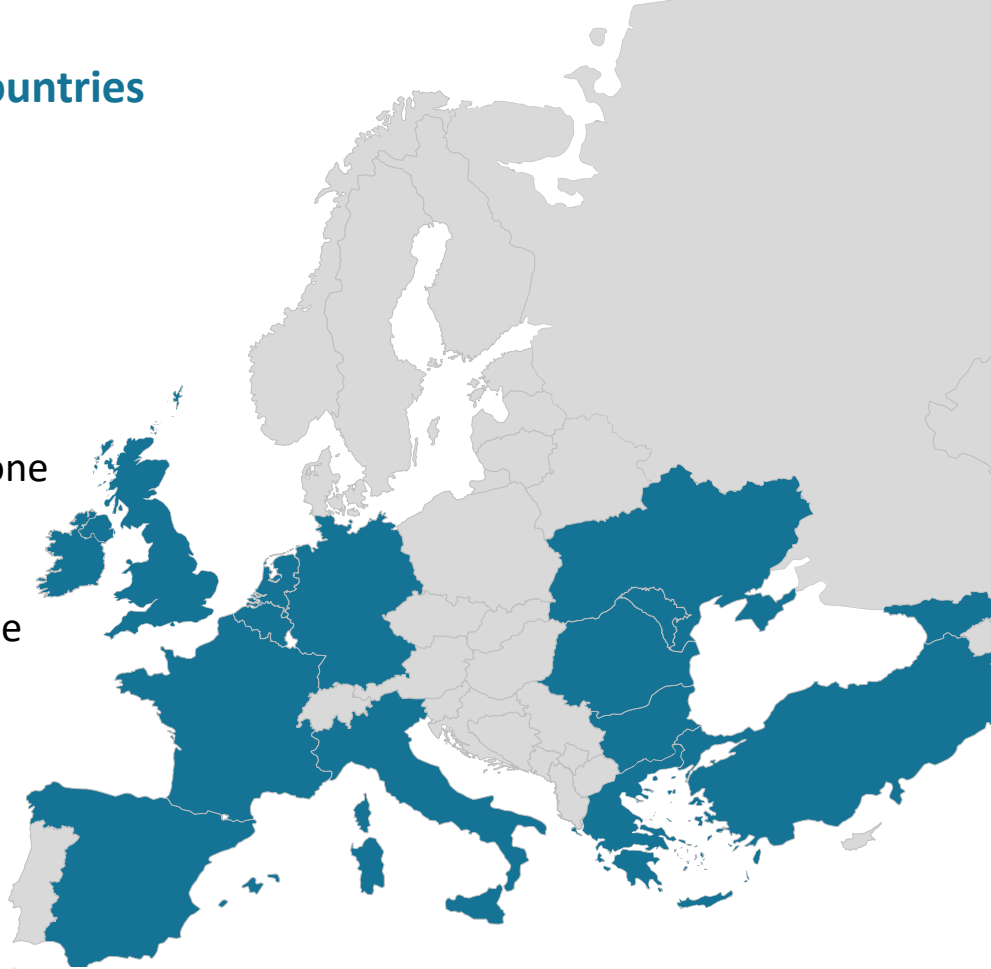
Step 1 of BG 11
with Step 2 – Sept 2020
Results of evaluation – Dec 2020
DOORS (and BRIDGE) – WIN !

Jun 2021

DOORS project starts
with project duration to May 31st 2025

35 Partners from 15 Countries

- 35 partners from 15 countries – including the most relevant research institutions around the Black Sea – and with global relevance (NOC, IFREMER) (initially 37 from 16 countries)
- The 4 relevant ERICs for marine sciences - and one ESFRI Research Infrastructure (to become operational during DOORS duration)
- All WPs bring together best expertise around the Black Sea and in Europe
- WP co-leadership – a step towards the proper integration of the scientific communities and know how, seed for future co-operations



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Project funded by the European Union N° 101000518

European Commission

Image: Dan Borzan

DOORS Objectives

To make operational the Black Sea SRIA, support the successful Blue Growth implementation and contribute to a healthy, productive and resilient Black Sea.

3 Key Programmes:

1

System of Systems (SoS)

The platform for evidence-based knowledge development to include in situ, Earth observation and modelled data on the Black Sea, giving access to to physical, geological, chemical, and biological parameters of the Black Sea.

2

Blue Growth Accelerator (BGA)

To identify of sectors for innovation, providing professional support to unlock their potential. Facilitating constructive exchange between scientists, entrepreneurs and policy makers for development of Blue Growth sectors.

3

Knowledge Transfer & Training (KTT)

Bring together different actors on science and policy to promote a culture of openness, share best practice and knowledge. It will build capacity to address impacts by engaging stakeholders from the beginning of the project.

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1

DOORS has 4 specific objectives:

Objective 1: Create a harmonised set of methodologies for data acquisition for a coordinated regional approach.

- will deliver harmonised methodologies for sampling, measurement, analysis and modelling, based on existing best practices and will enable all the Black Sea coastal countries to use FAIR (Findable, Accessible, Interoperable and Reusable) compliant data (existing and new).
- This harmonised set of methodologies and data, through the **System of Systems (SoS)**, will support policy interventions and facilitate Blue Growth implementation at the basin-scale.

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DOORS
BLACK SEA

2

Objective 2: Integrate interdisciplinary scientific knowledge, in order to address the impacts of human-induced activities and climate change, as input needed to effectively implement policies in the Black Sea.

- Will be achieved by developing the SoS for the Black Sea. By offering access to the data, the SoS will support the better understanding of the complex composition and dynamics of the human-induced impacts and climate change from river mouths to its deeper parts.

Image: Andrew Tyler

Developing Optimal and Open Research Support for the Black Sea
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Image: Adrian Stanica

3

Objective 3: Realise ecosystem services and Blue Growth sectors' potential and provide support for entrepreneurship.

- DOORS will deliver a **Blue Growth Accelerator (BGA),** which will promote opportunities for sustainable business development in blue economy sectors.

- **BGA** will promote synergies, organise training and mentoring schemes and facilitate access to investors to practically support growth and job creation. The focus will be also on new and emerging sectors such as aquaculture, marine renewables and blue biotechnologies.

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DOORS
BLACK SEA

Objective 4: Bring the Black Sea Environment closer to society.

4

- DOORS will increase societal awareness and stewardship of the Black Sea environment through the KTT and incorporate the requirements of the Bucharest Convention Parties into the development of the SoS.

- The **Knowledge Transfer and Training** (KTT) Programme will create mechanisms that enable education, support exchange and use of scientific knowledge, and provide the opportunity for stakeholder involvement in the development and delivery of key project outputs.


Image: @dmitryant746

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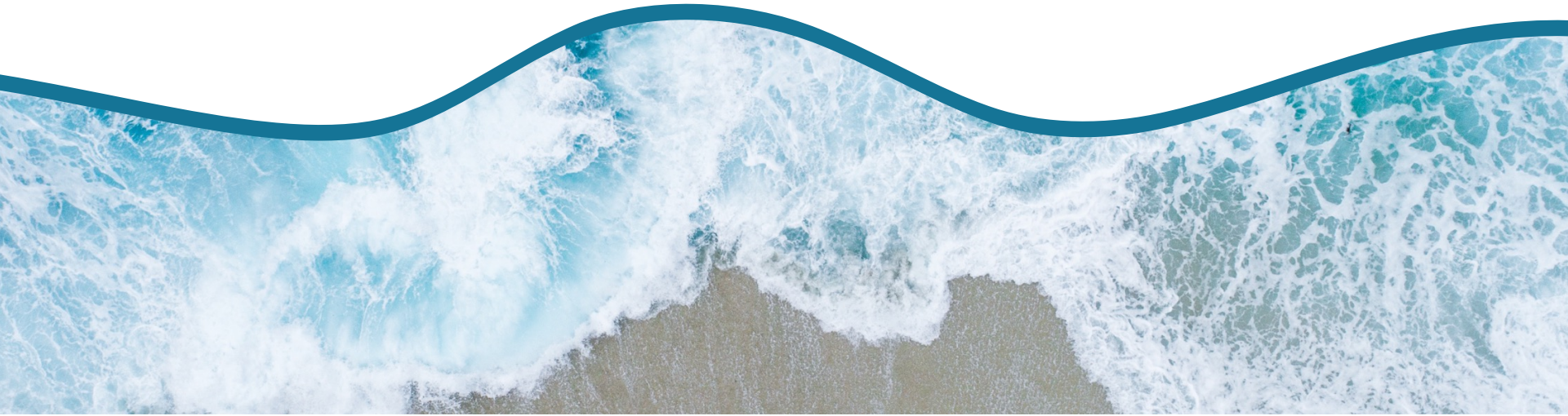
Multi-Actor Forums



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The Multi-Actor Forums

Participatory working groups bringing together key stakeholders in each case study country to explore issues related to Blue Growth in the Black sea region.

Objective No.1
Identify local needs

Objective No.2
Link the local needs to regional and global drivers

Objective No.3
Develop innovation pathways to support Blue Growth in the region

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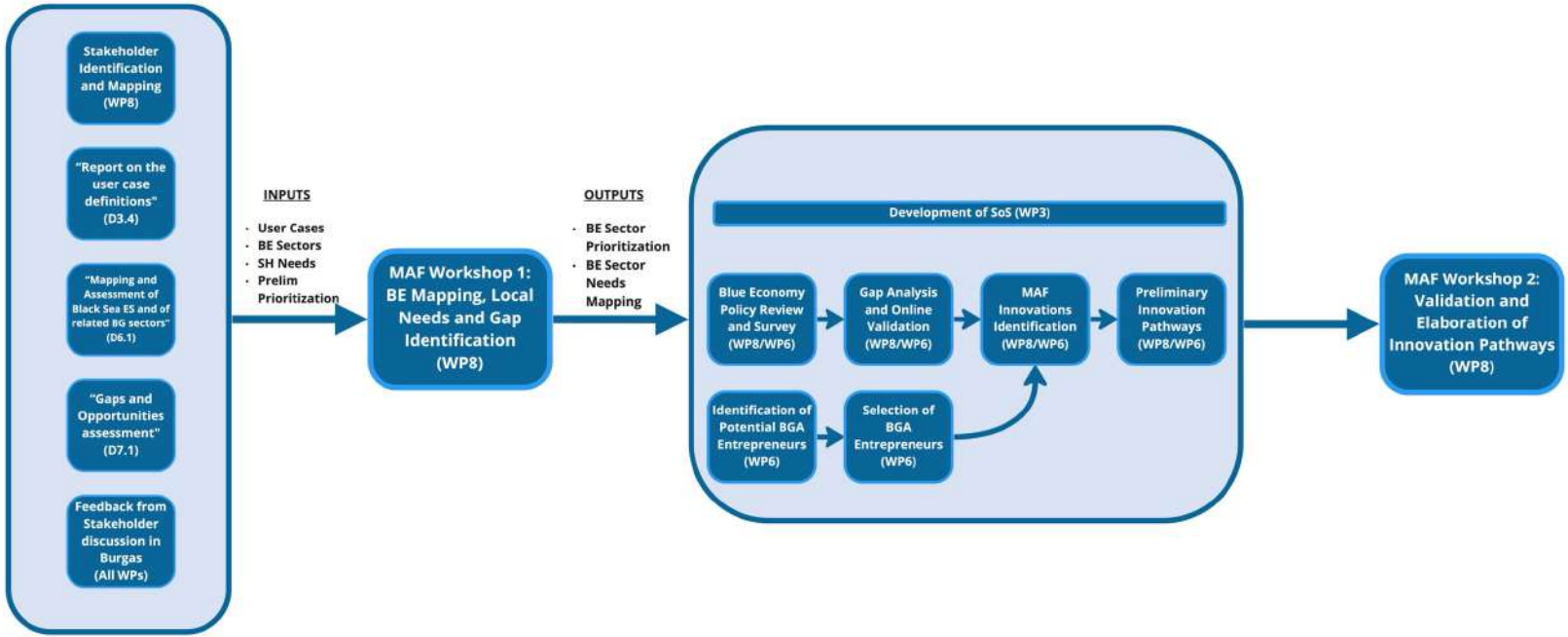
MAF OVERVIEW AND INTERACTIONS



DOORS
BLACK SEA

Jul 2022

Finalization of the stakeholder mapping and validation by external partners.

Oct 2022

Black Sea Policies mapping

Delivery of a "Train the Facilitator" workshop for the 1st round of MAFs

Policy mapping & Development and dissemination of an online survey *on needs and gaps assessment.*

Feb 2023

Completion of the 1st round of MAF workshops in 4 Black Sea countries: Bulgaria, Georgia, Romania and Turkey.

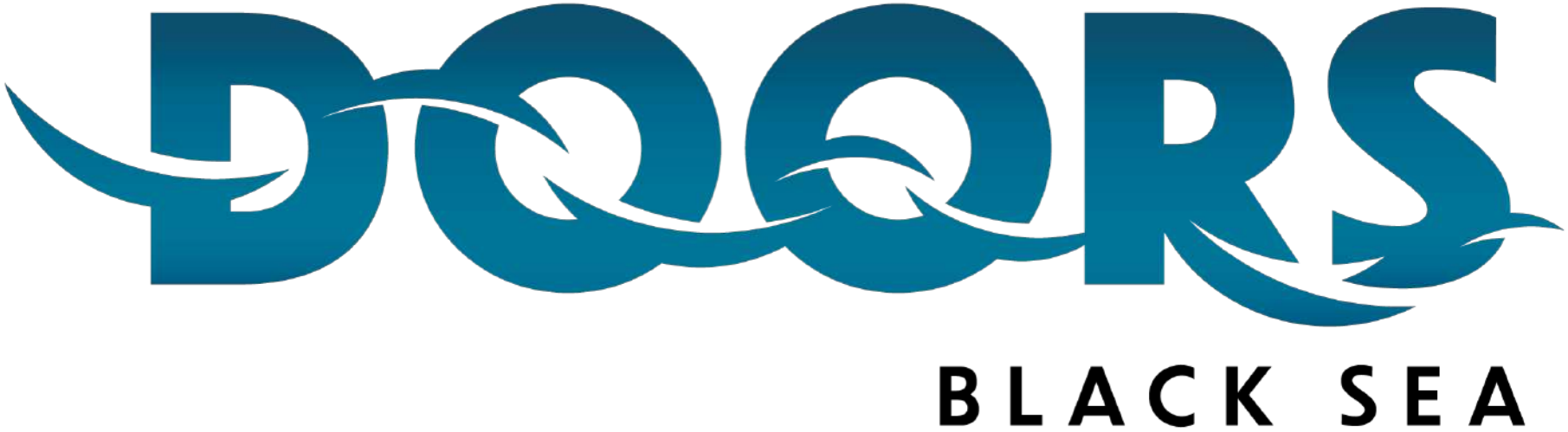
Nov 2024

Gaps and Needs analysis *based on the results from the 1st MAF and the online survey.*

Delivery of a "Train the Facilitator" workshop for the 2nd round of MAFs

Apr 2024

Completion of the 2nd round of MAF workshops in 6 Black Sea countries: Bulgaria, Georgia, Romania, Turkey, Moldova & Ukraine.



Multi-Actor Forums – Priorities and Needs

1st Multi-Actor Forum Methodology

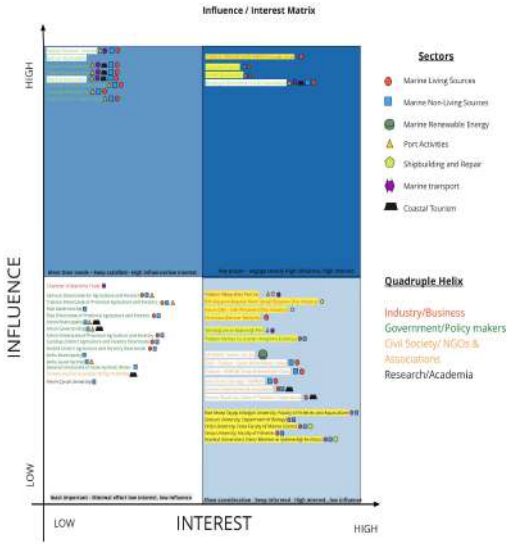
BEFORE THE MAF

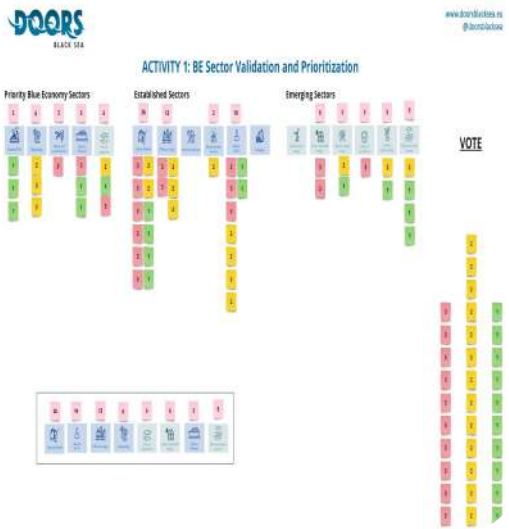
Stakeholder mapping

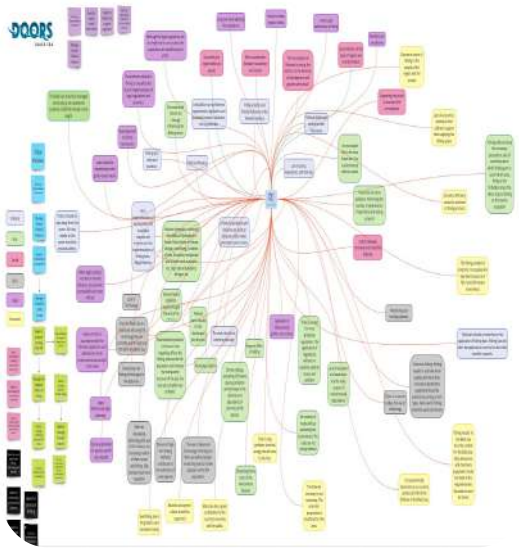
DURING THE MAF

Activity 1. BE Validation and Prioritization

Activity 2. BE Needs Mapping







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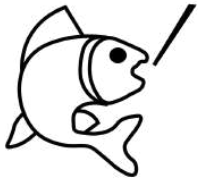
TURKEY - 1st Multi-Actor Forum

Date: 9th of November 2022
Venue: KTU, Üniversite, Trabzon, Turkey

Priority Sectors*

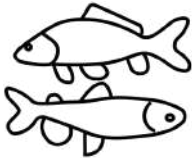


Capture fisheries

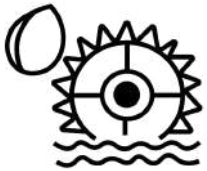
Marine R&D

Offshore oil&gas

Shipbuilding



Marine aquaculture



Ocean renewable energy

*In blue, the established industries; in green, the emerging industries

Needs/Challenges**

- ✓ Lack of policies on fisheries management
- ✓ Pollution and environmental degradation
- ✓ Climate change impact on biodiversity
- ✓ Overfishing
- ✓ Lack of job opportunities
- ✓ Lack of education, cooperation and social interaction in the fishing industry
- ✓ Lack of advanced technologies in the fishing industry (e.g. for monitoring the fishing vessel in the region)
- ✓ Lack of implementation of regulations (incl. controls and penalties)
- ✓ Lack of quotas in the fishing industry

**PESTLE approach:
Political, Environmental, Social, Technological, Legal, Economic

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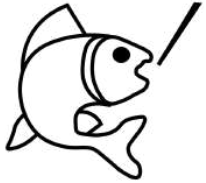
BULGARIA - 1st Multi-Actor Forum

Date: 18th of November 2022
Venue: Burgas Free University, Burgas, Bulgaria

Priority Sectors*

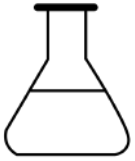
Shipping/Ports

Capture fisheries



Marine and coastal tourism

Marine Business Services



Marine R&D

*In blue, the established industries; in green, the emerging industries

Needs/Challenges**

- ✓ Geopolitical instability
- ✓ Lack of international cooperation
- ✓ Lack of vision and long-term planning
- ✓ Pollution and environmental degradation
- ✓ Lack of trainings
- ✓ People's attitude
- ✓ Lack of personnel and low salaries
- ✓ Shortage of seabed research
- ✓ Lack of adequate infrastructure and green energy
- ✓ Insufficient administrative control (incl. monitoring and control)
- ✓ Corruption
- ✓ High competition with other European markets
- ✓ Financial crisis

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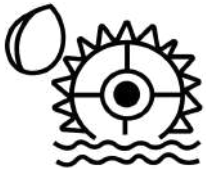
ROMANIA - 1st Multi-Actor Forum

Date: 25th of January 2023
Venue: GeoEcoMar, Constanta, Romania

Priority Sectors*

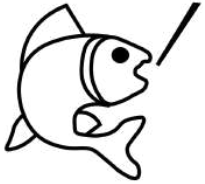
Marine R&D

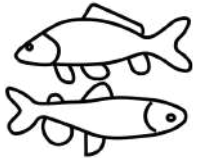
Marine and coastal tourism



Ocean renewable energy

Capture fisheries





Marine aquaculture

*In blue, the established industries; in green, the emerging industries

Needs/Challenges**

- ✓ Lack of collaboration and communication between all state institutions
- ✓ Lack of compliance with political obligations towards the EC
- ✓ Lack of a Black Sea brand at local and regional level
- ✓ Coastal pollution (coming mainly from tourism)
- ✓ Connectivity, through cultural and natural heritage, between neighbouring countries
- ✓ Lack of an ecological education program
- ✓ Need for digitization and creation of a unitary database.
- ✓ Research and use of non-polluting technologies
- ✓ Harmonization of national and EU legislation
- ✓ Adequate regulation, delimitation and planning of the use of marine and coastal space.
- ✓ Specific and integrated legislations, drafted clearly and concisely, with the elimination of legislative loopholes.
- ✓ Lack of carrying out adequate monitoring and control
- ✓ Lack of Investments in the infrastructure of the coastal zone

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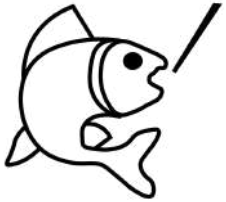
GEORGIA - 1st Multi-Actor Forum

Date: 2nd of February 2023
Venue: Hotel Radisson Blu, Batumi, Georgia

Priority Sectors*

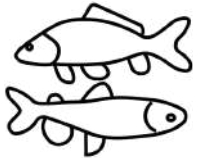
Shipping/Ports

Capture fisheries



Marine R&D

Marine and coastal tourism



Marine aquaculture

*In blue, the established industries; in green, the emerging industries

Needs/Challenges**

- ✓ Need for intersectoral synergy in maritime sectors
- ✓ Need for regional cooperation and intersectoral synergies
- ✓ Insufficient political will and funding for aquaculture
- ✓ Marine Litter and Seawater quality
- ✓ Disbalance of aquaculture sustainability
- ✓ Need for training and capacity building in all Blue Economy sectors (limited human resources in the fisheries sector)
- ✓ Maritime incidents
- ✓ Public awareness on aquaculture sector
- ✓ Need for marine research
- ✓ Need for a beach quality award system (e.g., Blue Flag)
- ✓ Reducing regulatory pressure in fisheries
- ✓ Need for developing the legislation according to the EU standards
- ✓ Need for environmental quality assessment legislation
- ✓ High bureaucracy
- ✓ Need for state aid for fisheries and aquaculture sectors
- ✓ Need for removing the tax barriers for the maritime sector

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MOLDOVA*

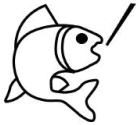
Priority Sectors**

Safety & surveillance

Marine and coastal tourism 


Offshore wind energy

Marine transport 


Capture fisheries

Shipping/Ports 

*The results come from the online survey "*Survey on Gaps and Needs Assessment in the DOORS countries*"

**In blue, the established industries; in green, the emerging industries

Needs/Challenges***

- ✓ Geopolitical instability
- ✓ Lack of strategic vision and long-term planning
- ✓ Lack of cooperation between national institutions
- ✓ Pollution and environmental degradation
- ✓ Lack of Monitoring and Control (Fisheries, MPAs etc)
- ✓ Marine litter and waste management
- ✓ Low salaries
- ✓ Lack of expertise and upskilling opportunities
- ✓ Lack of adequate infrastructure and green energy
- ✓ Lack of investments in the infrastructure of the coastal zone
- ✓ Lack of digitization and a unitary database
- ✓ High bureaucracy
- ✓ Lack of law enforcement and monitoring
- ✓ Corruption
- ✓ Lack of legislation on environmental quality assessment
- ✓ Lack of national financing mechanisms to support the development of the blue economy

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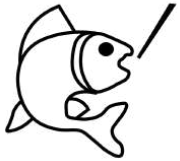
UKRAINE*

Priority Sectors**

Shipping/Ports

Marine transport



Capture fisheries

Marine and coastal tourism

Shipbuilding

*The results come from the online survey "*Survey on Gaps and Needs Assessment in the DOORS countries*"

**In blue, the established industries; in green, the emerging industries

Needs/Challenges***

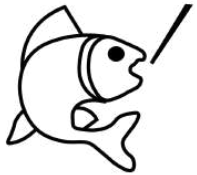
- ✓ Geopolitical instability – War in Ukraine
- ✓ Lack of downscaling EU Agendas
- ✓ International Cooperation
- ✓ Pollution and environmental degradation
- ✓ Lack of Monitoring and Control (Fisheries, MPAs etc)
- ✓ Marine litter and waste management
- ✓ Lack of job opportunities
- ✓ Lack of expertise and upskilling opportunities
- ✓ Lack of investments in the infrastructure of the coastal zone
- ✓ Lack of digitization and a unitary database
- ✓ Lack of adequate infrastructure and green energy
- ✓ High bureaucracy
- ✓ Lack of law enforcement and monitoring
- ✓ Lack of legislation on environmental quality assessment
- ✓ Lack of national financing mechanisms to support the development of the blue economy

***PESTLE approach:
Political, Environmental, Social, Technological, Legal, Economic

PRIORITY SECTORS IN THE BLACK SEA - 1st Multi-Actor Forum & Survey results

Priority Sectors*

Capture fisheries (6)

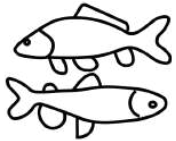


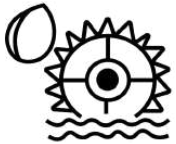
Marine and coastal tourism (5)

Marine R&D (4)

Shipping/Ports (4)

Marine aquaculture (3)

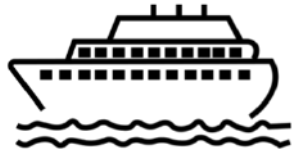




Ocean renewable energy (2)

Shipbuilding (2)

Marine transport (2)



Marine Business Services (1)

Offshore oil&gas (1)

Offshore wind energy (1)

Safety & surveillance (1)

*In blue, the established industries; in green, the emerging industries

The numbers in the brackets indicate the number of the MAFs that chose this sector as a priority sector

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CHALLENGES IN THE BLACK SEA - 1st Multi-Actor Forum

POLITICAL

- Geopolitical instability
- Lack of collaboration between all state institutions
- Need for regional cooperation and intersectoral synergies
- Lack of international cooperation
- Insufficient political will
- Lack of vision and long-term planning
- Lack of a Black Sea brand at local and regional level
- Lack of compliance with political obligations towards the EC

ENVIRONMENTAL

- Pollution and environmental degradation
- Seawater quality
- Imbalance of aquaculture sustainability and overfishing
- Climate change's impact on biodiversity

SOCIAL

- Need for training and capacity building in all Blue Economy sectors (limited human resources available)
- Lack of job opportunities
- Public awareness on aquaculture sector
- Need for connectivity through cultural and natural heritage, between neighbouring countries

TECHNOLOGICAL

- Need for marine research
- Need for initiatives, such as a beach quality award system (e.g., Blue Flag)
- Lack of adequate infrastructure
- Lack of advanced technologies (e.g. for monitoring the fishing vessel in the region)
- Need for digitization and creation of a unitary database.
- Need for use of non-polluting technologies

LEGAL

- Harmonization of national and EU legislation
- Specific and integrated legislations, drafted clearly and concisely, with the elimination of legislative loopholes.
- Lack of implementation of existing regulations
- Lack of carrying out adequate monitoring and control
- High bureaucracy
- Corruption

ECONOMIC

- Need for state aid for fisheries and aquaculture sectors
- Need for removing the tax barriers for the maritime sector
- Lack of quotas in the fishing industry
- Financial crisis
- High international competition in marine products
- Lack of Investments

MAF WORKSHOP:
Validation and Elaboration of BS Innovation Pathways

Objectives:

- ✓ To downscale the generic innovation pathways produced between workshops
- ✓ To review the Working Vision and Preliminary Innovation Pathways produced
- ✓ To identify milestones for achieving the vision within each relevant sector
- ✓ To map relevant innovations onto each of these milestones

2nd Multi-Actor Forum METHODOLOGY

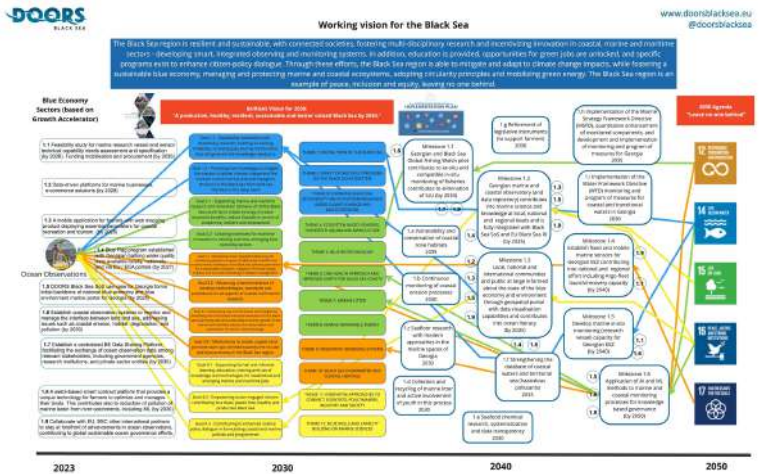
DURING THE MAF

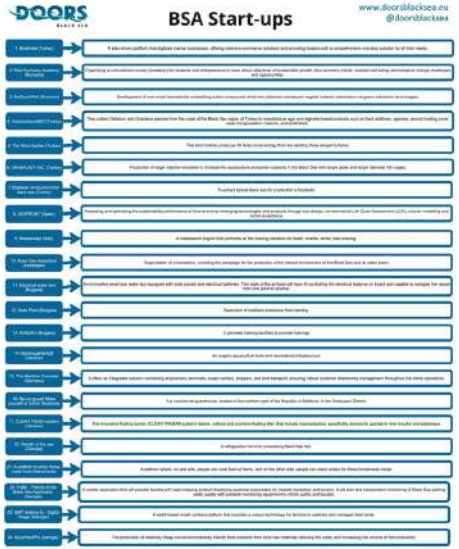
Activity 1. Validate the BS Vision

Activity 2. Add Milestones in the National Innovation Pathways

Activity 3. Match BGA Innovations to the Milestones

The Black Sea is resilient and sustainable, with connected societies, fostering multi-disciplinary research and incentivizing innovation in coastal, marine and maritime sectors - developing smart, integrated observing and monitoring systems. In addition, education is provided, opportunities for green jobs are unlocked, and specific programs exist to enhance citizen-policy dialogue. Through these efforts, the Black Sea region is able to mitigate and adapt to climate change impacts, while fostering a sustainable blue economy, managing and protecting marine and coastal ecosystems, adopting circularity principles and mobilizing green energy. The Black Sea region is an example of peace, inclusion and equity, leaving no one behind.





CORRESPONDING PILLAR:

- SRIA PILLAR 1: ADDRESSING FUNDAMENTAL BLACK SEA RESEARCH CHALLENGES
- SRIA PILLAR 2: DEVELOPING INNOVATION, SOLUTIONS, AND CLUSTERS UNDERPINNING A SUSTAINABLE BLACK SEA BLUE ECONOMY
- SRIA PILLAR 3: BUILDING OF CRITICAL SUPPORT SYSTEMS AND INFRASTRUCTURES FOR THE BENEFIT OF BLACK SEA COMMUNITIES
- SRIA PILLAR 4: EDUCATION AND CAPACITY BUILDING

2nd MAF WORKSHOP: Vision development

- Our methodology is grounded in **Systems Innovation** and **Appreciative Inquiry**
- it is necessary to develop a **'Normative Qualitative Scenario' (Vision),** in order to govern the backcasting process.
- This 'Vision' is an embodiment of goals based on the existing Black Sea Vision, but seeks to build on this to a **longer time horizon** (2050) by incorporating:
    1) The BURGAS Vision for 2030: "A productive, healthy, resilient, sustainable and better valued Black Sea by 2030."
    2) The promise of 2030 Agenda: "Leave no-one behind"
    3) Feedback from the 1st MAF
    4) Feedback from DOORS project partners
    5) The main outputs of the policy gap analysis
    6) The UN Sustainable Development Goals.
- Working to a longer timeframe (i.e. beyond 2030), is a key aspect of Systems Innovation, as Innovation is rarely what happens in the short term but requires mid- and long-term actions.

MIRO Board

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Working vision for the Black Sea

A resilient and sustainable Black Sea region, with connected societies, fostering multi-disciplinary research and incentivizing innovation in coastal, marine and maritime sectors - developing smart, integrated observing and monitoring systems; providing education and unlocking opportunities for green jobs; and finally, enhancing citizen-policy dialogue through specific programs. These efforts seek to mitigate and adapt to climate change impacts on the Black Sea, while fostering blue growth, managing and protecting marine and coastal ecosystems, adopting circular economy principles and mobilizing green energy. Black Sea will be an example of peace, inclusion and equity, leaving no one behind.

The Black Sea is resilient and sustainable, with connected societies, fostering multi-disciplinary research and incentivizing innovation in coastal, marine and maritime sectors - developing smart, integrated observing and monitoring systems. In addition, education is provided, opportunities for green jobs are unlocked, and specific programs exist to enhance citizen-policy dialogue. Through these efforts, the Black Sea region is able to mitigate and adapt to climate change impacts, while fostering a sustainable blue economy, managing and protecting marine and coastal ecosystems, adopting circularity principles and mobilizing green energy. The Black Sea region is an example of peace, inclusion and equity, leaving no one behind.

2023 2030 2040 2050

CORRESPONDING PILLAR:

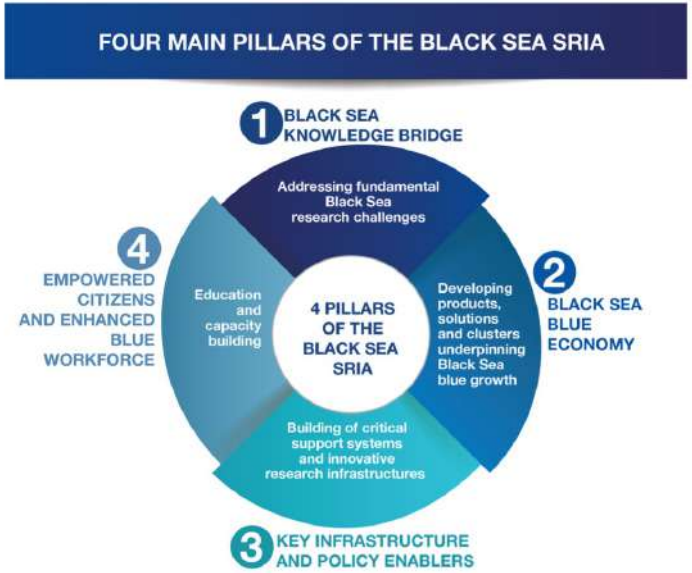
- SRIA PILLAR 1: ADDRESSING FUNDAMENTAL BLACK SEA RESEARCH CHALLENGES
- SRIA PILLAR 2: DEVELOPING INNOVATION, SOLUTIONS, AND CLUSTERS UNDERPINNING A SUSTAINABLE BLACK SEA BLUE ECONOMY
- SRIA PILLAR 3: BUILDING OF CRITICAL SUPPORT SYSTEMS AND INFRASTRUCTURES FOR THE BENEFIT OF BLACK SEA COMMUNITIES
- SRIA PILLAR 4: EDUCATION AND CAPACITY BUILDING

2nd MAF WORKSHOP:
Innovation Pathways Development

- Following the establishment of a long-term vision, we determined which SDGs were most pertinent to the Blue Economy.

2nd MAF WORKSHOP: Innovation Pathways Development

- The Black Sea SRIA and the BS SRIA Implementation Plan were then utilised to determine the most important 2030 milestones.
- Under the 4 BS SRIA Pillars, 11 Goals & 12 Themes were identified and used as key Milestones for all Black Sea countries



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Priority Sectors Heatmap

Sectors	Ocean Observation	Ports & Transport	Fisheries and Aquaculture	Marine Tourism	Blue Biotechnology	Renewable Energy	Nature-Based Solutions
BULGARIA							
GEORGIA							
MOLDOVA							
ROMANIA							
TURKEY							
UKRAINE							

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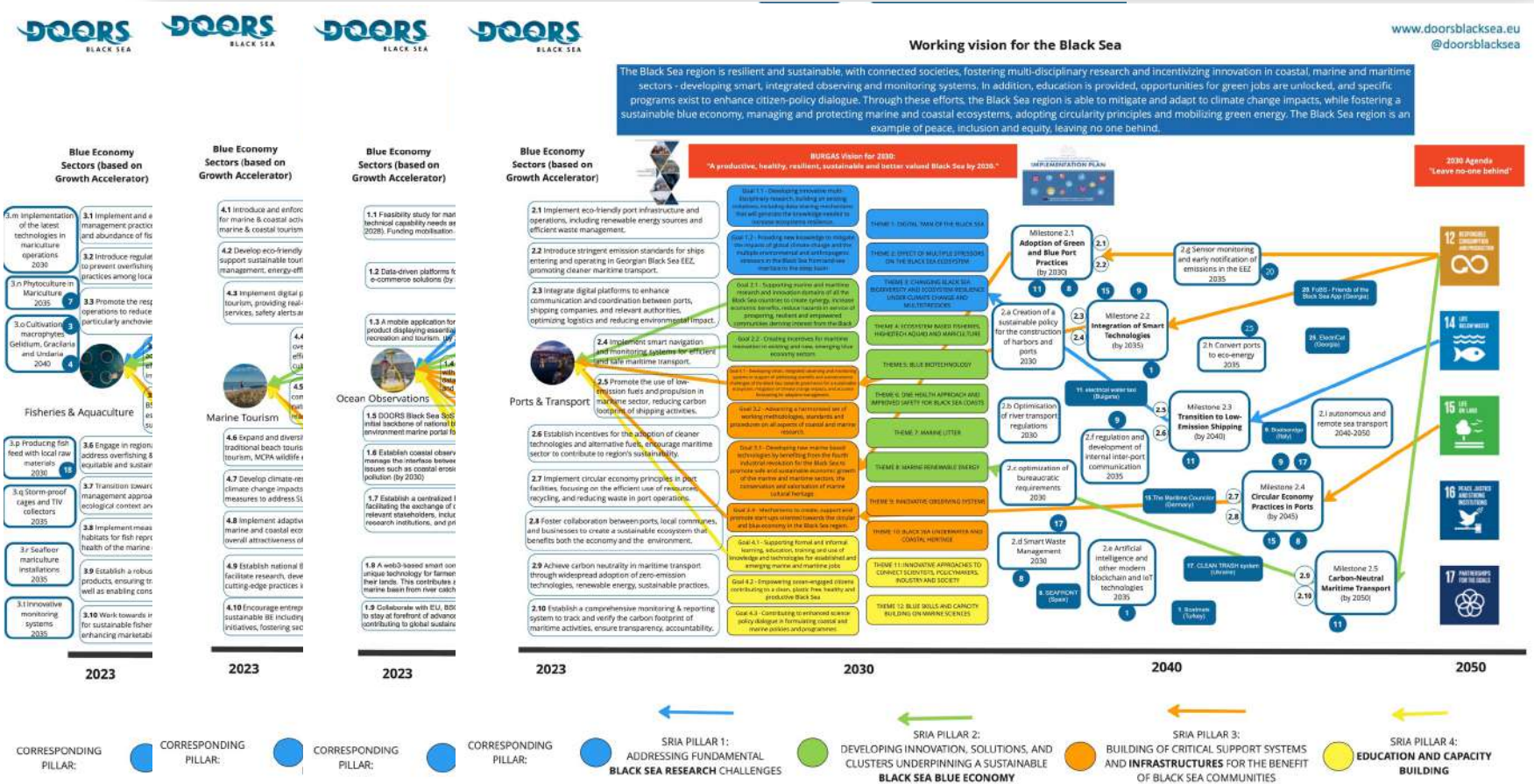
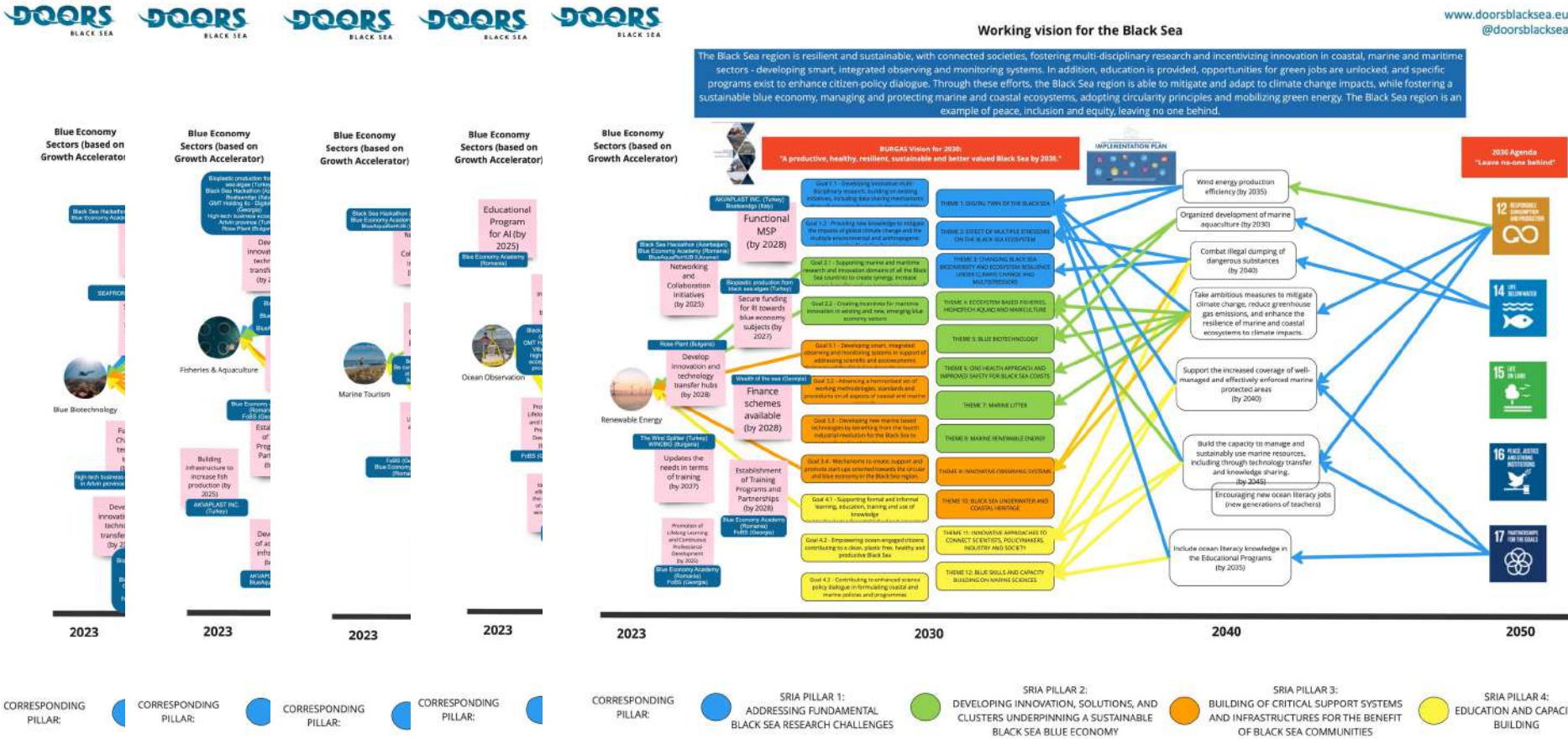
GEORGIA – 2nd Multi-Actor Forum

Date: 2nd of February 2024
Venue: 'Radisson Blu' Hotel, Batumi, Georgia & online



ROMANIA – 2nd Multi-Actor Forum

Date: 13th of February 2024
Venue: GeoEcoMar Institute, Constanta, Romania



MAF Methodology: Take-aways

- Engaging stakeholders at an early stage of the MAF development process has numerous advantages:
  - ✓ As **key stakeholders** in the BS became more informed about the DOORS project's aims and objectives, their **interest in the project's results (SoS, BGA and KTT) increased**.
  - ✓ The **preferences, needs, and concerns** of individuals who will be most significantly affected by the BS Policy Agenda were identified.
  - ✓ Certain requirements and obstacles that stakeholders raised were **overlooked by the BS Policies.**
  - ✓ We **co-designed innovation pathways** that illustrate the sequential actions (milestones) required to transform each priority sector in every BS country into a sustainable.
  - ✓ The knowledge gained from both workshops will be incorporated into the formulation of **policy recommendations.**

Questions

DOORS
BLACK SEA

Thank you for your attention

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Image: **Adrian** Stanica

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