



BRIDGE-BS

Blue Growth Incubators | Service Dynamics | Empowered Citizens

**1st REPORT ON GOOD PRACTICES ON TRAINING & LEARNING
EXCHANGE PROGRAM (BCC ACTIVITIES, SUMMER SCHOOLS, BLUE
MOVE ACTIVITY, REPORT OF ACTIVITES FROM THE STUDENTS'
EXPERIENCE)**



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Executive Summary

Important achievements were accomplished within WP9 during the first year of the project. All the milestones were delivered on time, and some with a very slight delay, while the methodology was followed for most of the subtasks without great deviations.

Subtask 9.1.1. “Blue Career Center in the Black Sea”, led by MCB, has been launched to provide a platform for blue economy related on professional courses, qualifications, mobility and employment opportunities, projects, internships, workshops, and all information related to the Blue Move subtask for young students and scientists. The Milestone 9.12 “Launch of the Blue Career Center with a dedicated webpage on the project’s website was delivered in M12.

Under the Subtask 9.1.2. PhD “Programme on Blue Growth”, led by IO-BAS, PhD calls are launched.. Some complications with the different requirements and rules for opening a PhD position of the relevant partner were experienced. However, Milestone 9.1 “Call for the PhD candidates from the Black Sea” was delivered on time.

Subtask 9.1.3 “Establish a Science-Technology-Policy English language MSc on Blue Growth”, led by METU has been slightly modified to take the form of Massive Open Online Course (hereafter MOOC) , which will be subsequently transformed into a online Master course. The MOOC will form the basis of the graduate program.

The “Summer Schools & Training and Learning Exchange Program” (Subtask 9.2.1), led by the University of Istanbul, was conducted successfully on 23-25 August 2022 with the participation of 12 early career ocean professionals from Black Sea countries. During the summer school, leading researchers and blue economy experts from across Europe shared the fundamentals of marine science and sustainable blue economy in the Black Sea.

The “Training & Learning Exchange Programme” Subtask (9.2.2) led by IO-BAS, made good progress according to plan with one workshop planned by CNR-ISMAR for "Developing and implementing a Risk-based assessment (RBA) framework on Pilot Sites using the CEA approach" which will take place in January 2023.

Subtask 9.3.1. “Blue Move” Activity, led by CETMAR, delivered Milestone 9.5 “Good practices on Blue Move”. At the same time, CETMAR also contributed to the preparation of the templates and collection of information on mobility opportunities/offers for the launch of the Blue Career Center.

Subtask 9.3.2 “Young Ambassadors”, led by METU, delivered Milestone 9.6 “Selection of themes and Open Call for the Ambassadors”. Under the Black Sea CONNECT Project, Black Sea Young Ambassadors conducted local, regional and online activities (as field trips, photography contest, vlogs) for raising awareness on the Black Sea and Black Sea Strategic Research and Innovation Agenda during Spring-Summer 2022 period.

Lastly, regarding subtask 9.4, (Activity I “Hands on activities for school children”), despite this first year being the preparation phase for this subtask, Milestone M9.8 “Selection of teaching material for



schools and identification of schools to work with” was delivered as an explanatory document of what is foreseen from TUDAV for this subtask.



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1. Introduction

WP9 “Education and Capacity Building” has the objective to support the development of a cohesive, knowledgeable and literate Black Sea international community. The aim is to educate, train and stimulate interactions between the public, and future generations of marine scientists towards a much better-connected Black Sea community, strengthened with a new generation of researchers, to address emerging challenges facing Black Sea marine ecosystems and their services.

During the first year of the project, most of the WP9 tasks and their subsequent subtasks had commenced and achieved most of their targets with only minor deviations.

This deliverable will report on the following tasks and sub-tasks:

Task 9.1 Training & Capacity Building Programmes (Lead: IO-BAS):

Sub-task 9.1.1: Blue Career Center in the Black Sea (MCB)

Sub-task 9.1.2: PhD Programme on Blue Growth (IO-BAS)

Sub-task 9.1.3: Establish a Science-Technology-Policy English language MSc on Blue Growth (METU)

Task 9.2 Summer Schools & Training and Learning Exchange Program (Lead: IU):

Sub-task 9.2.1: Summer Schools (IU)

Sub-task 9.2.2: Training & Learning Exchange Programme (IO-BAS)

Task 9.3 Support the “Youth Move” towards Blue Action (Lead: IM):

Sub-task 9.3.1: “Blue Move” Activity (CETMAR)

Sub-task 9.3.2: Young Ambassadors (METU)

Task 9.4 Hands-on Marine Science (TUDAV):

Hands on activities for school children (Activity I)

In the next pages, the progress made by each subtask is outlined with specific sections giving a better overview of where we stand after the completion of the 1st year of the project: Introduction, methodology, results, and deviations from the original plan and mitigation measures. The collection of this information forms Deliverable D9.1 “1st report on Good Practices on Training & Learning Exchange Program (Including BCC activities, Summer schools, Blue Move Activity, Report of activities from the students’ experience)”.



2. Training & Capacity Building Programmes (Task 9.1, Lead IO-BAS)

2.1 Blue Career Center in the Black Sea (Subtask 9.1.1, Lead: MCB)

Introduction

The main objective of Task 9.1.1. is the establishment of the Virtual Blue Career Center in the Black Sea (VBCC). Hosted by the BRIDGE-BS project website, VBCC is designed as a virtual tool, that provides students as well as professionals or experienced workers with relevant information and career guidance in accordance with the required blue industry skills. The Virtual Blue Career Center acts as a promoter, multiplier, and leverage for 5 core blue economy sectors in the Black Sea, enabling future employees to become familiar with the opportunities to acquire new skills and competencies and promoting the blue economy as an source of professional development and education for young future professionals and people already working in one of the blue economy sectors. More blue economy sectors will be added as the project progresses.

VBCC is created building on the outcomes on the MENTOR project and is connected with BRIDGE-BS project subtasks 9.1.2, 9.1.3, 9.2.1, 9.2.2, 9.3.1, 9.4.

Methodology

The activities for the creation of the VBCC were foreseen in three main stages: 1. conceptualization, 2. development and 3. launch.

The conception of the VBCC BS was developed by task leader MCB with the contributions of the WP9 project partners. Thus, a roadmap was created describing the goals, objectives, content structure, target groups, main activities, dissemination strategy and sustainability actions for the virtual tool. All the conceptual elements, described in detail below, have been integrated into a concept note and approved by the project partners.

The activities for the implementation of the VBCC have been grouped under three milestones: conceptualization, development and launch. Their scheduling was the following:

M1-M5 - Concept and approach: The phase included building the roadmap, elaborating of concept note and its distribution to project partners in order to agree on the next steps of the development of the virtual tool.

M6-M9 - Development: The main activities consisted of web page development, architecture of information, center-specific visual concept and layout design, collection of ground information for the pilot phase of testing the VBCC, and creation of template for collecting the information for the running phase.

M10-M12 - Launch of the VBCC for the Black Sea: The project activities focused on fine-tuning the general information provided about the selected blue economy sectors, communication and dissemination to partners for the launch of the virtual tool, mobilization of partners' networks for gathering relevant information on existing education and career development opportunities.

As a part of the project website, the VBCC needed a structure that could provide relevant information to website visitors. For this reason, three main sections of the VBCC page are envisaged: (1) An informative general section containing the objectives, target groups and activities as the main page for the Virtual Blue Career Center, (2) an internal infrastructure specific to each sector, (3) a page as a showcase for all collected blue economy opportunities under VBCC and a search button to filter them.



- Blue economy sectors stood at the basis of defining the field of the VBCC activities and naturally became a core element in the definition of its information structure. It was proposed to consider the names of the sectors according to Blue Economy Report 2021, ISBN 978-92-76-37879-2): Marine living resources and aquaculture;
- Maritime Transport (including shipping & inland waterways, ports, shipbuilding & ship repair);
- Coastal & Maritime Tourism;
- Marine Renewable Energy;
- Blue Biotechnology;
- Each sector has a similar internal structure that includes:
 - Description, general data, and trends;
 - Career-related information - the main professions and information about them; information about career exchanges and other similar events, and additional sources for useful information about the blue economy sector;
 - Information about master's and PhD programs, professional courses, and additional information for professional qualifications;
 - Relevant mobility opportunities and projects suitable for the target audience of the Virtual Blue Career Center;
 - News, useful information, and media content.

It was decided that the information for the sections will be provided in two phases:

Phase one - MCB collects ground information for the pilot phase of the VBCC: MCB conducted extensive desk research about the description, general data, and trends for each sector and provided an initial portion of the career-and-education-related information, relevant news, media content, and events for each sector. The data is uploaded to the VBCC for the pilot phase of the implementation of the tool.

Phase two: Completing information on education and professional opportunities by the partners organisations: MCB created a template to be sent to the partners internally to fill the information in a structured way.

Each project partner from the countries in the Black Sea shall mobilize stakeholders within their network to provide relevant information about the educational opportunities that universities and professional training organizations in their country offer, as well as information on relevant events, projects, and mobility opportunities. After analysing, if the input received from the partners is in line with the VBCC platform and its objective, MCB would send the filled template to the METU Coordination team to oversee the uploading of the content on the website.

Following the implementation of the virtual tool, partners would be contacted regularly by MCB to provide relevant information and opportunities.

Results

The Virtual Blue Career Center subtask met the objectives set out during the 1st year of the project. A concept note was prepared presenting the roadmap for the creation of the Virtual Blue Career Center in the Black Sea, based on which the main web page structure that can be seen on the current VBCC



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web page (<http://bridgeblacksea.org/index.php/virtual-blue-career-center/>) has been delivered. The main pages of the webpage are illustrated in Fig.1, Fig.2 and Fig3.

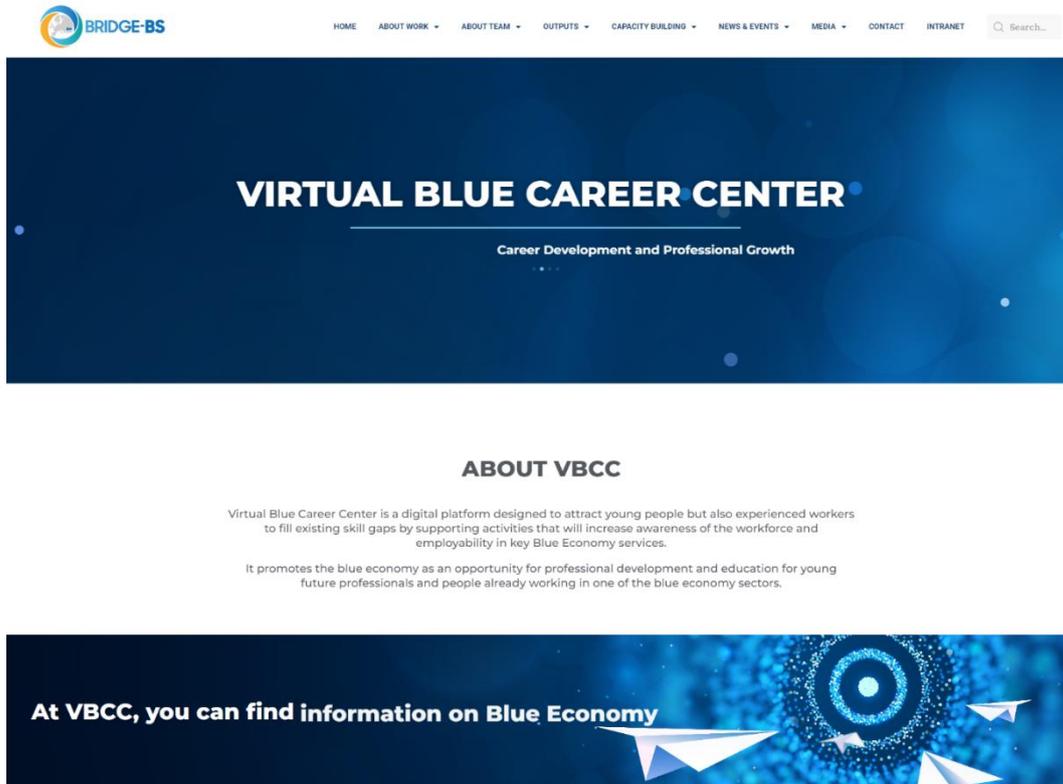


Fig.1 Main page of Virtual Blue Career Center – About VBCC

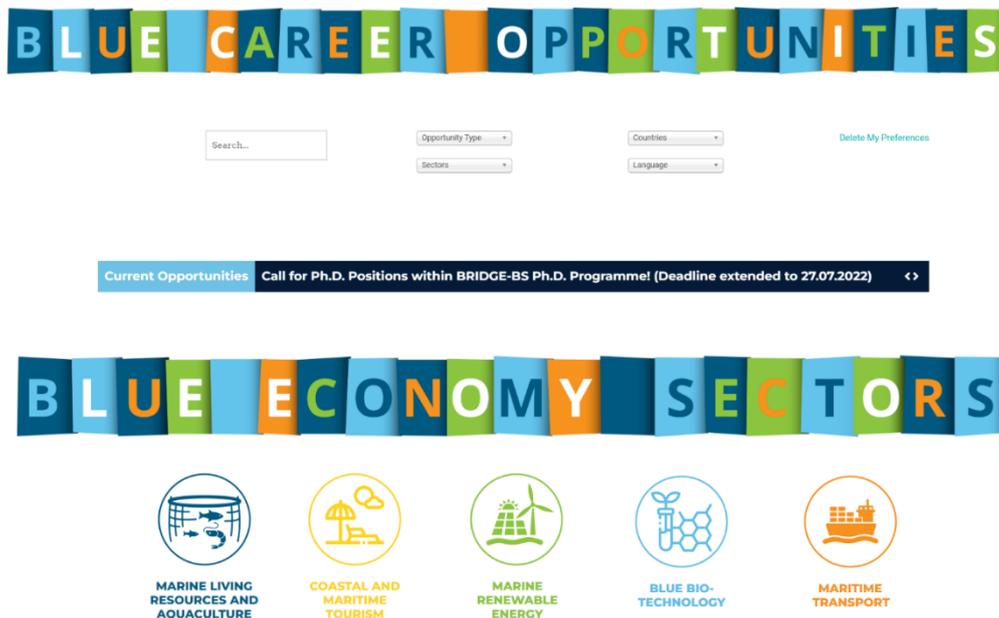


Fig.2 Main page of Virtual Blue Career Center – Blue Economy Sectors



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The screenshot displays the VBCC Search Tool interface. At the top, there is a search bar and several filter dropdowns: Opportunity Type, Sectors, Countries, and Language. A 'Delete My Preferences' link is also visible. Below the filters, four event listings are shown, each with a 'See the Opportunity' button and a 'Read More' dropdown.

Event Title	Language	Date	Location	Organizer
16TH INTERNATIONAL CONFERENCE ON MARINE SCIENCES AND TECHNOLOGIES	English	20-21 October 2022	Varna	VARNA SCIENTIFIC AND TECHNICAL UNIONS TECHNICAL UNIVERSITY
INTERNATIONAL SYMPOSIUM ON FISHERIES AND AQUATIC SCIENCES	English	25 October 2022 – 27 October 2022	Trabzon, Turkey	Central Fisheries Research Institute (SUMAE)
BRIDGE-BS SUMMER SCHOOL	English	23.08.2022 – 25.08.2022	Istanbul	Istanbul University
THE “BLACK SEA BLUE POLICY”	Georgian	05.07.2022 – 05.07.2022	Batumi, Georgia	Ministry of Education and Science of Georgia and the Ministry of Education and Science of the Autonomous Republic of Abkhaz

Fig.3 Search Tool of VBCC

Information was gathered about professions, career development, and education opportunities in the Black Sea region. Relevant news, video, and media channels were added and organised into subsections for each sector. The final result can be seen at the following links, organised by blue economy sectors:

Maritime transport: <http://bridgeblacksea.org/index.php/vbcc-maritime-transport/>

Coastal and maritime tourism: <http://bridgeblacksea.org/index.php/coastal-and-maritime-tourism/>

Renewable Energy: <http://bridgeblacksea.org/index.php/marine-renewable-energy/>

Blue biotechnology: <http://bridgeblacksea.org/index.php/blue-bio-technology/>

Marine living resources and aquaculture: <http://bridgeblacksea.org/index.php/marine-living-resources-and-aquaculture/>

At the same time, a template (Annex I) for information collection was prepared by MCB, where project partners were asked to mobilize their networks and share, in a structured way, actual information on career and education opportunities. Collected information is structured with different categories and made available via a search bar.

The search feature categorizes the available opportunities in relation to the Blue Economy sectors under different categories (Opportunity type: Conference, internship, job, seminar, study program, summer school, webinar, workshop; Sectors; Countries; Language), allowing the young professionals to navigate within the directory of existing programmes and opportunities. Every opportunity provides brief information and links to the necessary websites. This feature will be continuously updated with the relevant information to be received from the BRIDGE-BS partners and other available sources.

Deviations from the original plan and mitigation

The activities planned to be performed within the scope of VBCC were carried out according to the initial timeline. However, one deviation from the initial task plan should be mentioned which was due to the difficulty of our Ukrainian partner, responsible for the web development, to be engaged with the project activities after the war in Ukraine started in February 2022. Thanks to the timely reaction of the project coordinator – METU, the IT development task of the Ukrainian partner was taken over



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by METU who could deliver the biggest part of the assignment. Despite the unplanned workload, all the functionalities of the VBCC webpage, including designing and setting up the information and layout, and developing an extensive search button, were carried out on time.

2.2 PhD Programme on Blue Growth (Subtask 9.1.2, Lead: IO-BAS)

Introduction

One of the crucial objectives of BRIDGE-BS is to develop education and training programmes for upskilling and ensuring the understanding of Blue Economy services by the workforce in the Black Sea (BS). The sub-task's 9.1.2. objective is to launch a BRIDGE-BS dual supervision PhD programme and to support the mobility of the PhD students that will be involved with the project, ensuring the transfer of expertise and knowledge between regions and serving as incubators and ideas for future start-ups.

Methodology

An open call for the PhD students with dual supervision from both Black Sea and Western Europe (within the Consortium Members) was launched for all BS partners (host institutions). Based on merit and applicant profile, which institution to get the PhD students will be decided by the Steering Committee. At least 2 PhD students would have started their PhD on a Blue Growth-related topic in the first year of the project.

A concept note was prepared in September 2021 (M4) and finalized after discussions with the project coordination team and WP9 leaders through two online meetings (M6). A survey for preliminary screening of potential partners for PhD full support from the project was prepared and circulated among Black Sea partners (M7) (Annex II). PhD Calls were announced on both the BRIDGE-BS project website and IO-BAS websites (M8).

Results

Based on the template for the survey, the PhD Call specifications (application documentation - guidelines, requirements, conditions and selection criteria) were prepared and 5 PhD Calls were announced on the BRIDGE-BS project website and IO-BAS website (Milestone 9.1) (M8).

METU announced 2 PhD positions: "Oceanographic studies of the Black Sea specific biogeochemical and physical dynamics" and "Assessment and prediction of Black Sea ecosystems resilience and ecosystem services under the effect of multiple stressors": http://bridgeblacksea.org/wp-content/uploads/2022/06/BRIDGE-BS_PhDCall_Updated.pdf.

IO-BAS has also announced 2 PhD positions:

The first one is on "Molecular assessment of fish biodiversity" and the second one on "Jellyfish ecology". More information on these can be found at:

http://bridgeblacksea.org/wp-content/uploads/2022/06/BRIDGE-BS_PhDCall_Updated.pdf

and <http://io-bas.bg/en/phd-announcements/>.

TSU (Tbilisi State University) might be able to make an announcement for 1 PhD position ("Environmental economy"/ "Human Geography") in January 2023, however, this will be confirmed in due course with the TSU partners.



Three of the PhD calls (METU – both positions and IO-BAS “Molecular assessment of fish biodiversity”) were officially opened during this reporting period. For the autumn semester (2022), the application evaluations are still ongoing.

One application was received for the IO-BAS position and the exams (one thematic exam and one English language exam) were scheduled for mid-June (17 June and 24 June 2022). The candidate however did not show up for the exams and therefore, the position was not filled. The other PhD call – “Jellyfish ecology” was announced and was officially opened after July 2022. Currently, there is one potential applicant and application results will become available at the end of December. The PhD position at TSU (“Environmental economy”/ “Human Geography”) has already been announced but it will be officially opened in January 2023.

Deviations from the original plan and mitigation measures

Initially, it was planned that at least 2 PhD students would start their PhD in year 1 on a Blue Growth-related topic, however, the different requirements and rules for announcing and applying for a PhD position in the different Black Sea countries, caused an unforeseen delay.

Since the candidate for the IO – BAS PhD position is only one, the selection procedure is limited due to the lack of competition. Generally, the limited number of applicants or even the lack of applicants (which is a National level problem) makes it difficult, or even in some cases impossible, to select suitable candidates although the PhD calls are promoted regularly on the relevant Institutions' sites and the BRIDGE-BS social media.

2.3 Establish a Science-Technology-Policy English language MSc on Blue Growth (Sub-task 9.1.3, Lead: METU)

Introduction

To equip Early Career Ocean Professionals with the necessary theoretical and practical skills about marine research on the Black Sea, an MOOC and further MSc course will be set up directly linked to BRIDGE-BS and its outputs. This subtask aims to design, produce, disseminate and launch a course for master-level graduate students.

Methodology

Under this subtask, a Massive Open Online Course (hereafter MOOC) will be designed and launched first, which will be subsequently transformed into the form of an online Master course. The process towards achieving this aim will follow several steps.

A Massive Open Online Course (MOOC): Meeting Series: Regular meetings will be held with BRIDGE-BS partners and Steering Committee during the course development process (for concept and content creation, deciding host platform etc.). MOOC content will cover the three nodes of BRIDGE-BS, and volunteers will be chosen for each Work Package for both assisting in content development and course presentations.

Desk research and Survey: An extensive search will be conducted to collect good practices, similar course programmes, and descriptions in the Black Sea, European Seas, and beyond with the contribution of all consortium members. Besides that, a survey will be conducted among BRIDGE-BS partners to ask for advice on existing programmes and internal regulations on lecturers taking part in



the MOOC. The outcome of the research and survey will help to design the course content and sub-topics. (contributions will be received during the 2nd year of the project).

Survey analysis, concept and content creation: Based on the results, survey analysis and group discussions, course concept and content will be developed by the 2nd year of the project.

Course materials creation: The content, PowerPoint presentations, quizzes, video tutorials/shoots/editing and other related materials will be developed by the 3rd/4th year of the project.

Setting up and Test Run of MOOC: Setting up on a platform, a test run will be conducted by BRIDGE-BS researchers and graduate students (3rd/4th year of the project).

Visibility and Dissemination of MOOC: The promotion and communication of the BRIDGE-BS MOOC will be done through projects and partner organisations' websites, social media, mass media, and more. The MOOC will be advertised on various platforms and events such as Summer Schools, Blue Career Days, as well as other BRIDGE-BS channels, including Virtual Blue Career Center, events during and beyond the project lifetime.

Launch of MOOC: The launch of the MOOC will be done at the second half of the 4th year.

A Master Class (will be affiliated with METU, and the administrative progress of the establishment of an accredited course will be carried out at Türkiye-based METU): Based on the experience of the MOOC, the MSc Course/Program will be organised at a later stage of the project, and updates on that will be provided in the D9.3 midterm report of WP9.

Results

The conception of the idea and the methodology developed for the creation of the MOOC as a preliminary stage for the eventual development of the MSc course could be considered the major result of this subtask during the first 12 months of the project.

Deviations from the original plan and mitigation measures

Initially, a concept note was decided to be developed on Good practices and similar master programs and Class descriptions and delivered to all partners in Spring 2022. Partners would then explore how they could contribute with lectures, accreditation, etc.

Nevertheless, after experiencing challenges in subtask 9.1.2 "PhD Program on Blue Growth" with internal bureaucracy, the idea of the establishment of the MSc has evolved into creating first a MOOC program that will be eventually developed in the MSc Course, by considering the unique characteristics of the Black Sea, the stressors on the sea basin, and the blue growth solution for a sustainable and resilient Black Sea.

3. Summer Schools & Training and Learning Exchange Program (Task 9.2, Lead: IU)

3.1 Summer Schools (Subtask 9.2.1, Lead: IU)

Introduction

In order to upskill and ensure the understanding of the challenges and opportunities to be addressed for a sustainable Blue Economy across the Black Sea, BRIDGE-BS conducts a range of educational and capacity-building activities. With this aim, two summer schools will be organised by targeting graduate students from the Black Sea riparian countries. The courses provided during the summer school will cover the main aspects related to the Black Sea ecosystem and the challenges and opportunities faced



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by prominent economic activities for a sustainable Blue Economy in the Black Sea: i) management of marine living resources (fisheries and aquaculture), ii) green ports and sustainable transport, iii) coastal and maritime tourism, iv) renewable marine energies, v) blue-biotech.

The first face-to-face summer school took place on 23-25 August 2022 and was aimed at early career ocean professionals from the Black Sea riparian countries (for a total of 4 days, including the arrival day). It was hosted at one of the faculties of Istanbul University (IU).

Methodology

A series of meetings and email exchanges starting in April 2022 among the task participants initiated the dialogue among the task partners regarding the synergies between the Summer School and WP7 (“Accelerating ‘Industry 4.0’ business models”). The WP7 co-leaders, SML, showed interest in becoming involved in the Summer School, and upon discussion with the coordinators and task partners, it was agreed that the summer school would be facilitated by Frédérick Herpers and Matteo Bocci, co-leaders of BRIDGE-BS WP7. The draft agenda was prepared in M8-M9 after discussion and online meetings with IU, SML, METU, and INDIGO MED. Other lecturers and experts were also invited from the consortium (see Annex III for details).

The Summer School call for applications was circulated within the consortium by METU on 29 May 2022 and was further promoted on the Crowdhelix platform later in June.

Candidates were required to fill out an application form, submit an up-to-date CV or resume that shows their educational background and work experience as well as provide a statement of support from the student’s institution/university. The deadline for applications was 30 June 2022.

Results

- An online application form and a [call](#) with a concept note were created. This application form was sent to all partners and distributed all along their network. (M12)
- A total of 41 applications are received. Based on the eligibility (age, area of expertise, background, application documents), a short list of 15 students and a backup list is developed in cooperation with the IU as the organizer and METU Coordination. Diversity of the students in terms of nationality and research areas was considered. As a result, the final list of 13 selected applicants has been developed. During the selection of the applicants, provided information on their interest in Blue Economy, age, professional background, country, and gender are considered. In the end, 3 Romanian, 1 Bulgarian (The second Bulgarian candidate had to cancel last minute due to being infected with COVID-19), 1 Georgian, 1 Moroccan (working on the Black Sea with BRIDGE-BS partner, CNR), 6 Turkish students took part in the Summer School. As for the area of expertise, students were selected to represent different backgrounds. Even though most of them have more than one interest area, a general classification of their background can be summarized as Cluster and MSP (1), NGO and Economy (1), Modelling (1), Policy (1), Fisheries (1), Biotechnology (1), Coastal Engineer (1), Biology (5).
- The program was created to overview some of the Sustainable Blue Economy sectors. Each sector would be explained in 3-4 hours and it will follow the following order: Overview of trends, challenges, and opportunities (30 min), Exchange with the students and Q&A (30 min), Case study with International Practitioners (45 min) and Exercise/Group work (45 min) with the presentation of the group work (30 min). (Annex III)



- Case speakers to complement the general overview of each sectors are carefully selected among the international practitioners who have expertise in the Black Sea, Mediterranean and other regions. For Each sector, at least 2 case study speakers are selected to cover the sectors from different angles. Profile of the case study speakers is provided to the students in advance to allow them to do prior research. Some case study and keynote speakers are invited among the BRIDGE-BS Consortium (Stockholm University, TUDAV, HCMR and METU)
- An information pack for the selected applicants was also prepared. Students were also provided with a suggested reading list with recommendations from the moderators and the keynote speakers.

The 1st BRIDGE-BS Summer School was conducted successfully in the premises of Istanbul University in Istanbul on 23-25 August as three full days with the participation of 12 early career ocean professionals from Black Sea countries. During the summer school, leading researchers and blue economy experts from across Europe shared the fundamentals of marine science and sustainable blue economy in the Black Sea, and attendees had a chance to establish a great network and strengthen the exchange of information on the blue economy in the Black Sea. The structure of each sector (see the previous bullets) allowed students from different backgrounds first to get familiarized with the blue economy sectors. Later on, with different case study speakers on relevant projects and initiatives, they learned more on the various implementation of the blue economy sectors. Within the group work, they put their ideas into practice, focusing on innovative solutions on the challenges identified under each sector. Moderators and case study speakers that attended physically supervised the group work, which was later presented and feedback was provided by the moderators and other experts that were present.

- Detailed information on the Summer School is published on the [website](#) after the event which is also attached as an Annex to this document (Annex IV)
- A feedback session with the students were conducted at the end to help with the organization of the second summer school which is planned under the BRIDGE-BS project.
- During the Summer School, links between other WP9 tasks are established. Virtual Blue Career Center is introduced by MCB with a demo of how the search tool operates. Additionally, Black Sea Young Ambassadors are presented to the students and they are encouraged to applied to the call for the second cohort, whose application period was ongoing during the course of the Summer School.





Fig.4 BRIDGE-BS Summer School, Istanbul University, Istanbul, 23-25 August 2022

Deviations from the original plan and mitigation measures

There were no deviations in the methodology and approach of this task.

3.2 Training & Learning Exchange Programme (Subtask 9.2.2, Lead: IO-BAS)

Introduction

This Programme targets researchers, educators and academics to support mobility actions through study visits abroad on scientific and educational topics such as blue economy, marine ecosystem science, Resilience Machine learning, etc. within the consortium members. The aim is to transfer and allow sharing and diffusion of knowledge, expertise, technological know-how and good practices within the consortium. Different partners will use opportunities like WP specific meetings and project meetings to allow knowledge exchange.

Methodology

It is envisaged that at least 3 visits/seminars (with options to host them online or in a hybrid form) per year will take place. The topics are to be decided by the Steering Committee on an annual basis, based on the progress of work in the project and line with the project activities and events. Those who will be contributing to this knowledge exchange will be from the consortium and they will get paid through person months. The subtask will serve more internal (consortium) knowledge exchange to enable knowledge transfer within the extensive BRIDGE-BS consortium.

A concept note was drafted in January 2022 (M8) and a survey for potential options for a training & learning exchange program was prepared and circulated among the partners (M10). The survey will be regularly re-circulated among the partners to create interest and opportunities for partners as the project progresses.

Results

Two applications for the training & learning exchange program were received. One application for “Intercalibration work” was proposed by NIMRD, including workshops for dedicated teams for knowledge exchange between experts. Since the event has been initially planned within WP1, after discussion with project partners, it was decided to be excluded from WP9.



The second application received was from CNR-ISMAR for organizing a workshop on "Developing and implementing a Risk-based assessment (RBA) framework on Pilot Sites using the CEA approach" in January 2023 (Table 1).

This workshop is going to take place at the CNR ISMAR premises. All relevant project partners and especially Pilot Site contacts will be invited. A concept note and logistics details will be decided in late 2022. Relevant partners will travel to this event using their travel budget allocated for WP4.



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Table 1. Template for the survey for potential options for training & learning exchange program.

Organization	Lecturer	Topic	Links with WPs	Links to Pilot sites	Specific modes of exchange program (lab visits, seminar, workshop, training)	Type of the event (online or in a hybrid form)	Potential date and duration (May 2022-May 2023)	Number of participants	Required skills
CNR-ISMAR	Ismar Team	"Developing and implementing a Risk-based assessment (RBA) framework on Pilot Sites using the CEA approach"	WP1 (data needs/data management); WP2 (inputs from model outputs); WP6 (Living labs)	Focused on Pilot Sites. 2-3 Sites are used for practical sessions.	Lectures and Practical Sessions on how to operationalise the RBA framework and CEA tools in Pilot Sites	In presence	3-4 days; Jan-Feb 23	10-20	Teams working on Pilot Sites; partners from other WPs linked with WP4 (e.g. WP1 on data, WP2 on models, WP6 on living labs, WP7 on innovation and BG scenarios)



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Deviations from the original plan and mitigation measures

One of the critical moments in the completion of the subtask is the low activity of the partners in organizing events within the Training & Learning Exchange Programme. In order to motivate partners to be more involved, the survey has been recirculated. In addition, due to organizational delay, there were no training events in the first year of the project (it is expected to host at least 3 events each year). Due to Covid-19, there were not many opportunities for physical meetings and exchanges. One way to overcome this obstacle could be to organise a seminar back-to-back with the project events (General Assemblies, WP level meetings, etc.) in the future.

4. Support the “Youth Move” towards Blue Action (Task 9.3, Lead: IM)

4.1 “Blue Move” Activity (Sub-task 9.3.1, Lead: CETMAR)

Introduction

The Blue Move activity aims to promote mobility and knowledge transfer in order to bring together students with scientific and industry-oriented profiles to better match current training and skills needs and labour-market demands in the Blue Economy context of the Black Sea.

Efforts will be concentrated in facilitating upper secondary level, university students and post-graduates and post-doc (early career) mobilities with interests in the Blue Research and Blue Economy realm in the Black Sea.

Blue Move will act as a support action of this and pre-existing initiatives and work to enhance their visibility and impact within the blue economy and the marine research realm in the Black Sea, attracting talent to the area and increasing their professional opportunities in that context.

It will also be used as an opportunity to reinforce collaboration and coordination between BRIDGE-BS and DOORS projects around the commitments of the two projects to work together for stakeholders' engagement, capacity building and knowledge transfer.

Methodology

Five major steps are foreseen to enable the implementation of this subtask:

Step One: CETMAR contributed with feedback to the activity led by the Marine Cluster Bulgaria aimed at carrying out a consultation process and desktop search about ongoing relevant initiatives and networks which involve some training and professional mobilities, especially if those are directly related to the blue economy context in the region and/or in any of its countries. The final purpose is to guarantee that BRIDGE-BS Blue Move is built on what is and has been going on in the Black Sea region.

The purpose of this step is to start the process by mapping what is going on in the region that is relevant to this activity. BRIDGE partnership will be requested to contribute with relevant benchmark references: reports, contact people, existing networks, funding programmes and/or projects implemented in the Black Sea area, and relevant initiatives in other areas in Europe. An on-line survey to the partners will be launched to gather this information, and CETMAR will contribute to this with some feedback to the partners in charge of the consultation process, with questions relevant from the mobility perspective.



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Step Two: Preparation of the on-line platform/support tool: CETMAR will evaluate the possibilities to implement the Blue Move by considering both the overall project network tools and standard social network platforms such as LinkedIn. It will aim to establish a network of individuals and attract them to the information on mobility programmes accessible at the VBCC including blue growth events and job/training/secondment offers relevant to the Black Sea Blue Community, etc. Some templates and/or contact forms will also be prepared and offered to the Community in order to facilitate a homogenized and organised exchange of information.

Step three: Promotion of the Blue Move towards its targets: An activity visual briefing will be prepared for dissemination. It will inform concisely about the purposes of this action in friendly language for any party (previously related or not with the BRIDGE-BS partnership and its network). It will offer the links to join the online Blue Move platform. BRIDGE BS partners will share the information among their organisations' staff and networks and encourage subscription/registration to the on-line platform. Dissemination to reach out to the students and business community in the region will need to rely on the BRIDGE-BS network.

Step four: On-line and/or in the presence of annual brokerages for mobility enhancement and professional development of the Black Sea Blue community will be organised by month 18 for the first time and yearly after that until the end of the project. Organisers will try to combine and take advantage of other project activities planned close to this brokerage.

Step five: Evaluation and extraction of lessons learned All these activities will be carefully planned and on-line supported by BRIDGE-BS Blue Move implementation partners.

The evaluation and extraction of lessons learned will be inspired by the Guidelines from the Green Move Pilot Experience from the MATES project (see the summary of this in Annex I). The partnership will extract the information needed to perform this assessment from the direct interaction and consultation with Mobility promoters, funders, and beneficiaries

Results

CETMAR delivered Milestone 9.5 "Good practices on Blue Move" in M6.

Since February 2022, CETMAR has contributed to the task by cooperating with MCB on the templates for the launch of the VBCC to join the efforts in the desktop search, to incorporate also the information on mobility opportunities/offers.

Additionally, CETMAR contributed to the promotion of the BRIDGE BS Summer School and the VBCC, not just through CETMAR's social networks (mostly on Twitter) but by contacting information about these BRIDGE BS initiatives with the chairs of the Med and Black Sea Regional Coordination Group for the Fisheries Data Collection of the EC, and the leaders of two linked projects RDBFIS Med&BS and StreamLine.



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Deviations from the original plan and mitigation measures

Step One of the Blue Move's methodology was to create a survey to which the BRIDGE-BS partnership would be requested to contribute with relevant benchmark references: reports, contacts, existing networks, funding programmes and/or projects implemented in the Black Sea area, and relevant initiatives in Europe. Nevertheless, as many complementarities in the methodologies of tasks 9.1.1 "VBCC" and 9.3.2 "Blue Move" were identified, a meeting was organised on January 2022 between MCB and CETMAR in order to establish synergies between the two tasks. During the meeting, it was decided that CETMAR not send a separate survey to the partners for collecting the information needed but instead adjust the survey that VBCC would send to the partners, by adding information related to mobility offers and activities.

The BRIDGE-BS Blue Move LinkedIn Group was not launched as planned during the first year of the project, as it was agreed between the subtask partners and the WP9 leader that this would take place after the VBCC would be launched and its content promoted. The VBCC was launched in Month 12 and new content is on the site. So, the launch of the LinkedIn group is expected to resume in September. CETMAR will manage Blue Move LinkedIn with support from METU and INDIGO-MED and others who may be able to help.

4.2 Young Ambassadors (Sub-task 9.3.2, Lead: METU)

Introduction

Black Sea Young Ambassadors Programme (BSYAP) is an ongoing programme developed in September 2020 under the H2020-funded Black Sea CONNECT CSA to unite youth for the future of the Black Sea, for a healthy, resilient, and sustainable Black Sea.

After the positive impact of the first cohort and the success of the programme, the BSYAP has been linked with the H2020-funded BRIDGE-BS RIA project to increase the impact and visibility of the program and ensure its sustainability. With BRIDGE-BS, not only the foundations of the BSYAs' work and efforts but also the bridge they have established between society and science will be strengthened and broadened in scope.

Methodology

In terms of the application process and announcement of results, a call for a new cohort of Black Sea Young Ambassadors was announced on 2 August 2022. Interviews with national mentors and ambassador candidates are due to take place from late September – early October. The announcement of the results will be published by late October.

Trainings and workshops will take place in late 2022 and early 2023, which will happen at an online orientation meeting, during a Winter/spring school (in the first half of 2023) as well as through an Awareness-raising campaign development workshop (in the first half of 2023).

In addition, online, local, and regional awareness-raising campaigns are planned, including the development of online or local awareness-raising campaigns and actions to address the challenges in the Black Sea and opportunities for a sustainable blue economy (from the second half of 2023 to October 2024).



Lastly, the BSYAs will attend various Black Sea and Blue Growth-related events including online Black Tea Time Meetings, one or more Black Sea CONNECT & BRIDGE-BS General Assembly meeting(s), and/or other external events or workshops.

A Black Sea SRIA National Consultation Meeting in a relevant Black Sea country (in 2023) and other training and capacity-building activities are also planned.

Results

Milestone MS39 “Selection of themes and Open Call for the Ambassadors”, was submitted in M6, January 2022, by METU: A call for Ambassadors was launched by M6, and Ambassadors were selected. Under the Black Sea CONNECT Project, the Black Sea Young Ambassadors conducted local outreach activities for raising awareness on the Black Sea and Black Sea Strategic Research and Innovation Agenda during Spring-Summer 2022 period. A brief overview of the activities is provided below.

Youth Power - Towards a healthy Black Sea: Exploring the Black Sea’s Beauties Together, Romania. (Fig 5) The aim was

- To raise awareness about the unique features of the Black Sea, its biodiversity, cultural heritage, and multi-stressors;
- To encourage youth to promote and protect the Black Sea, and adopt environmentally responsible behaviour;
- To help children understand why it is important to protect the Black Sea region, in order to ensure a sustainable future.

One workshop on secondary school children on Black Sea's unique features and one beach activity on invasive species as stressors in the Black Sea, Romania.

Love your rivers to protect the Black Sea: River clean-up activity on Dniester Day and Danube Day, Moldova. (Fig 6) The aim was

- To improve the environmental conditions of the rivers for less polluted water discharge into the Black Sea;
- To provide necessary information to Moldovan youth about the intense pollution of rivers;
- To promote the National Youth Network "Love your river!"

Educated and sensitized Georgian youth for the sustainable development of the Black Sea: fieldwork on the coast of the Black Sea combined with beach clean-up activity and informative session on the blue economy, Georgia. (Fig 7) The aim was

- To raise awareness of the youth about marine litter and other human activities damaging oceans and seas through current challenge-responsive activities;
- To encourage and engage youth to protect seawater from pollution;
- To promote and support coastline and seawater cleansing.

Visual Storytelling of The Black Sea: Different Shores, Different Reflections, and One Sea (Black Sea wide). (Fig 8) The aim was

- To raise awareness on the diversity of the Black Sea. (economic, cultural etc.)
- To highlight the services and the resources provided by the Black Sea as well as our commitment toward sustainable management of this sea basin.



- To showcase the negative effect of increasing intensity of human disturbance in the Black Sea ecosystems (pollution including plastic, climate change, eutrophication, overfishing, biodiversity loss, etc.)

Video blogs with marine scientists and Blue Economy experts (Black Sea wide)

- To raise awareness on the marine science research and blue economy sectors in the Black Sea.
- To connect scientists, experts to the general public for communicating science.

The new cohort of the Black Sea Young Ambassadors will conduct similar awareness-raising campaigns under the BRIDGE-BS project to further build on the activities organized by the first cohort.

Deviations from the original plan and mitigation measures

Due to the Covid-19 pandemic, some physical events had to be postponed or cancelled. Therefore, it is deemed suitable that the selection of the new cohort and the selection of the themes was postponed to allow time for the first cohort to carry out their physical activities and transfer their experiences to the newcomers. The respective milestone was submitted on time and the call for the new cohort was published on 2 August 2022.



Fig 5. Black Sea Young Ambassador Awareness Raising Campaigns; Selma Menabit, Romania



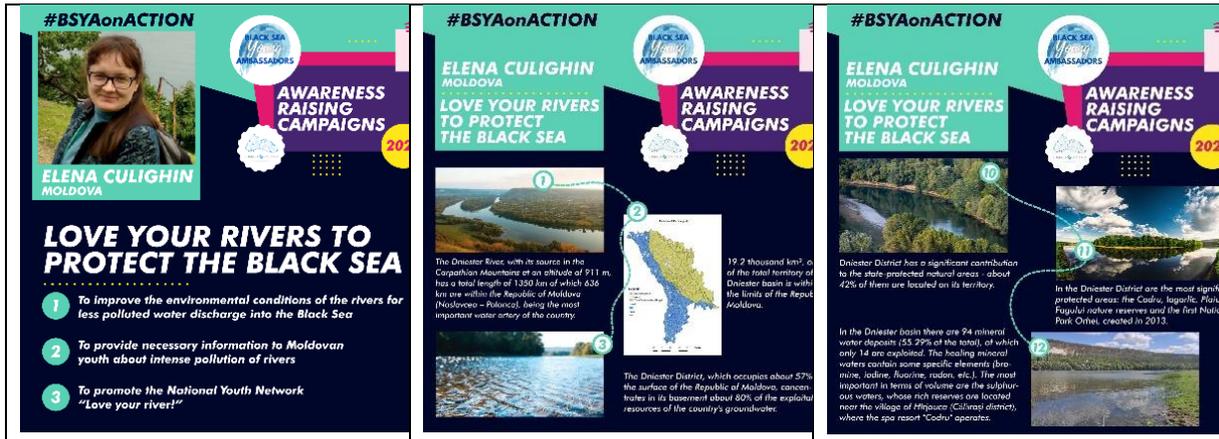


Fig 6. Black Sea Young Ambassador Awareness Raising Campaigns; Elena Culighin, Moldova

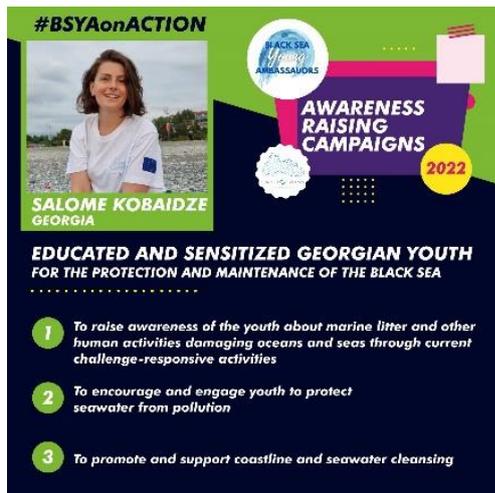


Fig 7. Black Sea Young Ambassador Awareness Raising Campaigns; Salome Kobaidze, Georgia



PHOTO CONTEST VISUAL STORYTELLING OF THE BLACK SEA

**BLACK SEA
Young
AMBASSADORS**

DIFFERENT SHORES

DIFFERENT REFLECTIONS
AND ONE SEA

APPLY HERE!

WHO ▶ PHOTOGRAPHERS FROM ALL AGES CAN ATTEND
WHEN ▶ APPLY UNTIL 6 SEPTEMBER 2022 AT MIDNIGHT (GMT+3)
HOW ▶ ENTRIES SHOULD BE SUBMITTED TO THE BLACK SEA CONNECT WEBSITE

SURPRISE PRIZES

Fig 8. Black Sea Young Ambassador Awareness Raising Campaigns; Oana Poiana, Romania



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5. Hands-on Marine Science (Task 9.4, Lead: TUDAV)

5.1 Hands on activities for school children (Lead: TUDAV)

Introduction

Task 9.4 aims to develop education and training programmes for upskilling and ensuring the understanding of the local marine environment and Blue Growth by the Black Sea youth.

Methodology

The first activity of 9.4 is “Hands on activities for school children” scheduled for M12-24. During the current reporting period, the activities below were carried out.

An initial ZOOM meeting to discuss the issues above was organized on 28 April 2022. The main conclusions are as follows.

- I. Activity 1 is for primary and secondary school children with ages approximately between 6 and 13.
- II. Activity will be carried out in Bulgaria, Romania, Georgia, and Turkey. (Ukraine and Russia are excluded from this activity due to the conflict.)
- III. The partners agree that each country should carry out different tasks determined by themselves based on their expertise and experience in conducting capacity building activities. E.g. NIMRD suggested activity on mollusc identification in Romania.
- IV. A common presentation to explain Blue economy and marine conservation will be prepared and translated into each language and shown to the participating children before the activity so that they all have a common understanding of the issue.

TUDAV internal online meeting: 25 May 2022. The content of the activity and competition was discussed.

- I. Dolphin-watching cruises in spring decided as the main activity.
- II. Raising awareness of marine biodiversity and conservation using Instagram Reel was decided as the national competition.

Results

M1-12 was the preparation phase for this subtask. Nevertheless, Milestone M9.8 “Selection of teaching material for schools and identification of schools to work with” which was due to be delivered in M10 was submitted in Month 12, as an explanatory document of the process that TUDAV will follow to achieve the tasks’ purpose.

Online meetings were organized with all task partners directly responsible for this subtask. They were introduced to each other and communication channels were established. Other relevant institutes were also informed and collaboration between them on some issues (such as the planned activities of the Black Sea Young Ambassadors) was established.

Deviations from the original plan and mitigation measures

Having to prioritize online meetings and activities over physical gatherings due to the pandemic can be mentioned as one of the obstacles that have been overcome. No other obstacle was identified so far as this task was in the preparation phase during the reporting period.



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6. Annexes

Annex I: Template for Partner Input Information for VBCC

TEMPLATE FOR PARTNER INPUT INFORMATION FOR THE VIRTUAL BLUE CAREER CENTER FOR THE BLACK SEA (VBCC)

The virtual blue career center is a virtual tool, hosted by BRIDGE BS project website, acting as a promoter, multiplier, and leverage for 5 core Blue Economy sectors including marine living resources and aquaculture, maritime transport, coastal and maritime tourism, marine renewable energy, blue biotechnology.

- It will be a platform that will promote the blue economy as an opportunity for professional development and education for young future professionals and people already working in one of the blue economy sectors. Having in mind the goals and objectives set in place, the main activities foreseen as part of the work of the VBCC are:
 - Promoting opportunities for professional realization in the field of the blue economy;
 - Promoting opportunities for acquiring educational and professional qualifications through master courses and PhD study;
 - Promotion of summer schools and mobility opportunities;
 - Promotion of relevant events for specialists in the blue economy;
- In order to collect relevant information, each project partner from the countries in the Black Sea is asked to mobilize stakeholders within their network to provide information about the educational opportunities that universities and professional training organizations in their country offer, as well as information on relevant events, projects, and mobility opportunities.

The “Blue Move” activity will promote mobility and knowledge transfer to bring together students with scientific and industry-oriented profiles to better match current training and skills’ needs and labour-market demands in the Blue Economy context of the Black Sea.

Mobility can be understood as any action that opens the possibility for a professional exchange linked to a temporary change of workplace and/or training site or involving the assumption of a different scope of activities and responsibilities within the same organisation or in a new one, all leading to professional enhancement and new chances for career promotion. [...] In BRIDGE-BS we will concentrate our efforts in facilitating upper secondary level, university students and post-graduates, and post-doc (early career) mobilities with interests in the Blue Research and Blue Economy realm in the Black Sea.

This template aims at collecting the information from project partners in unified format allowing for timely update and maintenance of the information in the virtual blue carrier center.

Please, fill in the information in the boxes below. If there is a section that is not relevant to the type of opportunity you want to post, leave it blank. If there is some additional information you want to share - send it as an attached file in the e-mail along with this form.

Activity title	
Place	



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Format	
Lead organization's name	
Lead's address	
Lead's contact details	
Type (please select from list)	
	Other (please specify):
Targeted groups of audience (please select from list)	
	Other (please specify):
Target Area of the Blue Economy (please select from list)	
	Other (please specify):
Start date	
End date	
Scope (please select from list)	
Language	
Is it recurring opportunity? (please select from list)	
Period of recurrence (please select from list)	
	Other (please specify):
Time during which the opportunity should be visible for VBCC viewers (please indicate a date period)	



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Name of the organization submitting the post	
Submitter address	
Submitter contact details	
Description (please provide a summary on the opportunity up to 200 symbols that will be visible to website visitors)	
Other relevant information	
Comments for the editorial team	
Is the activity announced in other social media? Please provide existing links	(Twitter, Linked in, Facebook,...)



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Annex II: Template for Survey for BRIDGE-BS dual supervision PhD programme

Template for the survey for preliminary screening for Potential Partners for BRIDGE-BS dual supervision PhD programme.

PhD CALL DETAILS	
Field(s) of Specialization:	Blue growth in the Black Sea
Topic:	Please provide the title and key words
Host Institution: (All Black Sea partners)	<ul style="list-style-type: none"> • IO-BAS (Bulgaria) • IBER-BAS (Bulgaria) • GEOECOMAR (Romania) • NIMRD (Romania) • TSU (Georgia) • UkrSCES (Ukraine) • METU-IMS (Turkey)
EU Institution: (co-mentor)	
Type of Contract:	Direct/Temporary
Duration:	36 months
Summary Description:	<p>Please, provide the following information:</p> <ul style="list-style-type: none"> • short description of the topic and relevance to the Blue Growth concept • expected output (advanced knowledge and skills in the respective field) • any other relevant details
Minimum Degree Required:	To be eligible for this PhD programme, you must have completed a master's degree programme in a relevant discipline (oceanography, chemistry and geochemistry, earth sciences, applied mathematics, earth system sciences, all engineering departments and any of the physical, biological, and chemical sciences and etc.).
Additional requirements depending of host institutions	
Required Special Knowledge, Abilities, and Personal Skills:	<p>General requirements can be found below but please refer to each institutions' PhD calls for more detailed information.</p> <ul style="list-style-type: none"> • Professional and academic qualifications relevant to the PhD project • Relevant publications • Relevant work experience • Other relevant professional activities • Excellent knowledge of English (written and oral) <p>High degree of creativity and flexibility; ability to work under pressure good quantitative and communication skills and ability to work in an interdisciplinary team of various fields</p>
Application Documents:	<p>Applicants are asked to submit:</p> <ul style="list-style-type: none"> • CV in Europass format



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	<ul style="list-style-type: none">• Motivation Letter (max 2 pages)• One reference letter• Add any other document which supports your application* <p>Please note that by applying to the PhD position, you accept that your personal data will be processed under the BRIDGE-BS data policy which complies with the GDPR rules. Please see the privacy note.</p> <p>*A separate application form should be provided by the host institutions to comply with national requirements.</p>
Deadline for Application:	
Final Selection:	
Proposed Start Date:	
Salary:	Working contract - the wages will be paid by the Black Sea host institution
Selection Procedure:	The selection procedure will be based on merit and applicant profile. The successful candidates will be decided by the Steering Committee.



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Annex III: Summer School Agenda

Date and Venue

23-24-25 August 2022 at Istanbul University [Rectorate](#) in Istanbul, Turkey

22.08.2022 - Arrival

23.08.2022 (1. Day)

- 09:00 - 09:30 **Opening Remarks**
Tour de Table, Ice-breaker
- 09:30 – 10:00 **Welcome Speech and Introduction of BRIDGE-BS Project**
Prof. Cem Gazioğlu, [Istanbul University](#)
Prof. Baris Salihoglu and Assoc. Prof. Mustafa Yucel METU-IMS & Coordinators of the [BRIDGE-BS Project](#)
- 10:00 – 10:45 **Introduction to Oceanography**
Prof. Dr. Baris Salihoglu from [METU-IMS](#), Turkey
- 10:45 – 11:00 **Coffee Break**
- 11:00 - 11:45 **Resilience of Ecosystems**
Dr. Susa Niiranen from [Stockholm University Resilience Center](#)
- 11:45 - 12:30 **Blue Economy and Policy Framework in the Black Sea**
Frederick Herpers, & Matteo Bocci, [SML](#)
- 12:30 - 13:30 **Lunch**
- 13:30 - 17:00 **Marine Living Resources: Fisheries and Aquaculture**
Overview on trends, challenges, opportunities (30 min)
Exchange with the students and Q&A (30 min)
Case study with International Practitioners (45 min)
Gizem Akkus, PhD student at METU IMS
Dr. Ayaka AMAHA ÖZTÜRK, [Turkish Marine Research Foundation](#)
- 15:15 – 15:30 **Coffee Break**
- Exercise/Group work (45 min) and presentation of the group work (30 min)
Wrap up and summary - Frederick Herpers, & Matteo Bocci

24.08.2022 (2. Day)

- 09:00 – 09:15 **Opening Remarks and Summary of Day 1**
- 09:15 - 09:30 **Introduction of the Virtual Blue Career Center**
Yana Popova from Marine Cluster Bulgaria
- 09:30 - 12:30 **Black Sea Renewable Energy**
Overview on trends, challenges, opportunities (30 min)
Exchange with the students and Q&A (30 min)
Case study with International Practitioners (45 min)



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Arthur SERMENT, [Pole Mer Méditerranée](#)

Murat DURAK, [DURED](#) (Offshore Wind Energy Association)

11:15 – 11:30 **Coffee Break**

Exercise/Group work (45 min) and presentation of the group work (30 min)

12:30 - 13:30 **Lunch**

13:30 - 17:00 **Blue Biotechnology**

Overview on trends, challenges, opportunities (30 min)

Exchange with the students and Q&A (30 min)

Case study with International Practitioners (45 min)

Dr. George Triantaphyllidis, [Hellenic Centre for Marine Research](#)

Prof. Murat Telli, [Beta ALG Biotechnology](#)

15:15 – 15:30 **Coffee Break**

Exercise/Group work (45 min) and presentation of the group work (30 min)

Wrap up and summary - Frederick Herpers, & Matteo Bocci

25.08.2022 (3. Day)

09:00 - 09:05 **Opening Remarks and Summary of Day 2**

09:05 - 09:45 **Deep Ecosystem of the Black Sea and Sustainable Blue Economy**

Assoc. Prof. Mustafa Yucel, METU IMS

09:45 - 12:45 **Coastal and Maritime Tourism**

Overview on trends, challenges, opportunities (30 min)

Exchange with the students and Q&A (30 min)

Case study with International Practitioners (45 min)

Mamuka Berdzenishvili, [Tourism 4.0](#)

Almila Kindan Cebbari [\(Foundation for Environmental Education in Turkey\)](#)

11:15 – 11:30 **Coffee Break**

Exercise/Group work (45 min) and presentation of the group work (30 min)

12:45 - 13:45 **Lunch**

13:45 - 17:15 **Maritime Transport**

Overview on trends, challenges, opportunities (30 min)

Exchange with the students and Q&A (15 min)

Case study with International Practitioners (45 min)

Anna Natova

Capt. Adrian Evtimov from Marine Cluster Bulgaria

15:30 – 15:45 **Coffee Break**

Exercise/Group work (45 min) and presentation of the group work (30 min)

Wrap up and summary Frederick Herpers, & Matteo Bocci

17:15-17:30 **Closing Remarks, Feedback from the Students and Farewell Activity**

Mustafa Yücel & Barış Salihoglu



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Annex IV: Summer School Press Bulletin

The 1st BRIDGE-BS Summer School was conducted successfully on 23-25 August 2022 with the participation of 12 early career ocean professionals from Black Sea countries.

During the summer school, leading researchers and blue economy experts from across Europe shared the fundamentals of marine science and sustainable blue economy in the Black Sea, and attendees had a chance to establish a great network and strengthen the exchange of information on the blue economy in the Black Sea.

The 1st day of Bridge-BS Summer School started with the welcoming speeches of Cem Gaziöğlü, Director of Istanbul University Institute of Marine Sciences and Management, and project coordinators Baris Salihoglu and Mustafa Yucel from Middle East Technical University Institute of Marine Sciences. The opening session continued with an introduction to the oceanography lecture of Baris Salihoglu, where the ECOPs had a chance to hear the fundamentals of marine science and the Black Sea.

In the next session, attendees had the chance to listen to Resilience of Ecosystems and learn more about what we can do for resilient seas and oceans from Susa Niiranen, Stockholm Resilience Centre. Then, focusing on marine living resources, Frédéric Herpers and Matteo Bocci from SML overviewed trends, challenges, and opportunities in fisheries and aquaculture. Here, attendees experienced an interactive session where they could share questions and express ideas. While coming to an end, Gizem Akkuş from Middle East Technical University Institute of Marine Sciences shared her experiences as a Black Sea Young Ambassador and Ph.D. student researching Marine Living Resources and fish stock assessment. With a speech from Ayaka Amaha Ozturk of Türk Deniz Araştırmaları Vakfı (TUDAV), the lecture session came to a close.

In her speech, she emphasized the threats to marine life and suggested ways to protect it while fostering a sustainable blue economy. An interactive workshop concluded on the first day of the BRIDGE-BS summer school after a series of interesting and motivating presentations. As part of a group project, ECOPs gathered to discuss the main issues facing marine living resources and offer solutions for a healthy Black Sea.

The 2nd day started with a speech by Yana Popova from Marine Cluster Bulgaria on Virtual Blue Career Center, which was established as part of BRIDGE-BS to raise awareness of the workforce and employability in Blue Economy services. An interactive workshop led by Frédéric Herpers and Matteo Bocci of Stratégies Mer et Littoral SAS concluded the day. During the discussion, attendees focused on Renewable Energy in the Black Sea and exchanged information on trends, challenges, and opportunities focusing on Renewable Energy in the Black Sea.

The next session was a talk on how to advance and promote sustainable offshore wind technology by Arthur Serment of Pôle Mer Méditerranée. Murat Durak from Dured Towea gave a speech to cap the event, highlighting some of the most successful wind energy projects. The day proceeded with group work, including Black Sea challenges, Blue economy opportunities, and innovative ideas for the sustainable Black Sea. ECOPs came together this time for Renewable Energy and pitched their suggestions for the better-valued Black Sea they want. Blue Biotechnology was another Blue Economy sector with great potential in the Black Sea. After the introduction to Blue Biotechnology, George Triantaphyllidis from HCMR presented the possible benefits of Blue Biotechnology for the Black Sea. In his presentation, he showed the best practices in different regions to pave the way for further applications in the Black Sea region. As a concrete example of the Blue Biotechnology sector, Murat



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Telli, the founder of Beta ALG Biotechnology, introduced a start-up company that conducts projects on microalgal biotechnology to develop innovative products within the concept of green technology for the food and cosmetic sectors. The 2nd day was closed with another workshop with a focus on Blue Biotechnology. ECOPs went over possible challenges and developed solutions based on their professions in multitrophic aquaculture, energy, and more to support the blue biotechnology sector in the Black Sea.

3rd day of BRIDGE-BS summer school started with a highly inspiring lecture by Mustafa Yucel from the Middle East Technical University Institute of Marine Sciences on the deep sea, its ecosystem services, and Blue economy potential in the Black Sea region. As a significant Blue Economy sector for Black Sea, Frédéric Herpers, and Matteo Bocci from Stratégies Mer et Littoral SAS (SML) moderated a session where attendees could hear more on Coastal and Maritime Tourism and address their questions to experts. In the next session, Mamuka Berdzenishvili from the Tourism 4.0 initiative shared with us the innovation potential within the tourism ecosystem with the help of critical enabling technologies from Industry 4.0. The session continued with Almıla Kından Cebbari from Foundation for Environmental Education in Türkiye. In her informative speech, she briefed the coastal tourism around the Black Sea and the iconic Blue Flag as one of the world's most recognized voluntary awards for beaches. The first group work of the day was held with a specific focus on Coastal and Maritime Tourism! There were a lot of creative ideas to identify challenges of sustainable coastal and maritime tourism in the Black Sea and develop solutions to support this Blue Economy sector in the region.

With extensive and catchy topics shared by leading researchers and experts, as well as interactive group works on the blue economy in the Black Sea conducted by participants, the 1st Summer School of BRIDGE-BS has been one of the most significant events in the blue economy field. Stayed tuned for the 2nd Summer School.



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