Interreg Co-funded by the European Union

Italy – Croatia

MareSkill

INTERREG ITALY-CROATIA PROGRAMME 2021 – 2027

Smart and innovative blue skills for competitive blue economy

MareSkill

D.1.1.4. Methodology for conducting Entrepreneurial Discovery Process for blue skills in focused sectors and innovation/entrepreneurial areas

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Project identification

Project id: ITHR0200456

Name of the lead partner organization: Veleučilište u Šibeniku

Name of the lead partner organization in English: Polytechnic of Šibenik

Project title: Smart and Innovative Blue Skills for Competitive Blue Economy

Project acronym: MareSkill

Programme priority: Sustainable growth in the Blue Economy

Specific objective 1.2: Developing skills for smart specialization, industrial transition and entrepreneurship

Project duration in months: 30

Work package: WP1 Entrepreneurial discovery process for discovering key blue skills lacking in sectors of the Blue Economy

Activity title: A 1.1. Create methodology for conducting entrepreneurial discovery process for blue skills in focused sectors and innovation/entrepreneurial areas

Delivery period: Period 1, 1-6

Activity description: With this activity, we are planning to define stakeholders based on previously defined focus sectors such as aquaculture, Nautical tourism, Maritime technologies and their application in the Blue Economy sectors, Environmental protection, technology transfer, entrepreneurship initiative, and innovation management. In this activity, project partners will identify the process of conducting interviews and define evidence of the blue skill gap.

Partner responsible: VUS, UNIZD and UNITS

Dissemination level: CO - Confidential

Status: Final

Version: V2

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Glossary

ARTI - Regional Agency for Technology and Innovation, Bari, Italy

CCE - Croatian Chamber of Economy, Zagreb, Croatia

EDP - Entrepreneurial Discovery Process (*A method used to identify and develop new economic activities through stakeholder engagement and evidence-based research*.)

EU - European Union

FF - Fenice Foundation NGO, Padua, Italy

GVA - Gross Value Added (*A measure of economic productivity that represents the difference between output and input in production.)*

OGS - National Institute of Oceanography and Applied Geophysics, Trieste, Italy

UN - United Nations

UNIRI - University of Rijeka, Rijeka, Croatia

UNITS - University of Trieste, Trieste, Italy

UNIZD - University of Zadar, Zadar, Croatia

VUS - Polytechnic of Šibenik, Šibenik, Croatia

Content

1. Introduction

The Blue Economy, a diverse range of sectors related to oceans, seas, and coasts, is a significant contributor to the European Union's (EU) economy. The established Blue Economy sectors have been key contributors, with comprehensive and comparable data available for these sectors [1]. In 2020, these sectors accounted for 2.8% of employment and 1.1% of the gross value added in the overall EU economy, highlighting their substantial impact [1]. According to the most recent Blue Economy report, the traditional sectors of the blue economy provide 4.5 million direct jobs and generate over 650 billion euros in turnover [1]. The concept of the Blue Economy is still evolving, with no universally accepted definition.

Different sectors, governments, and organizations use the term' blue economy' in various ways. The United Nations [2] defines the Blue Economy as a range of economic activities related to oceans, seas, and coastal areas, with an emphasis on sustainability and social equity. This comprehensive approach aims to promote economic growth, social inclusion, and livelihood improvement, highlighting the significance of environmental sustainability in oceans and coastal areas.

According to the 2023 EU Blue Economy report [1], the significant sectors of Italy's Blue Economy include Marine Living Resources (fisheries, aquaculture), Maritime Transport (goods and passenger transport), Coastal Tourism (recreational and hospitality services), Shipbuilding and Repair (construction and maintenance of vessels), and Marine Non-Living Resources (extraction of minerals and oil). These sectors offer significant potential for economic growth and are major contributors to the EU Blue Economy.

The emerging and innovative sectors of the Blue Economy include marine renewable energy (such as ocean energy, floating solar power, and offshore hydrogen generation), blue biotechnology (including algae production and processing that are not included in the marine living resources sector), desalination, maritime defense, security and surveillance, research, and infrastructure (including submarine cables and

robotics). Focused sectors and innovation/entrepreneurial areas in this project include aquaculture, nautical tourism, maritime technologies and their application in the blue economy sectors, environmental protection, technology transfer, entrepreneurship initiatives, and innovation management.

At the core of the Blue Economy's expansion are blue skills, which are crucial for a wide range of jobs in different sectors to promote sustainable development. This approach involves involving stakeholders, analyzing the market, and holding creative brainstorming sessions to determine where the gaps in knowledge and competencies exist, gather different perspectives, and identify upcoming trends. The result is a thorough assessment of both current and future skill requirements.

2. Overview of the Entrepreneurial Discovery Process

The Entrepreneurial Discovery Process (EDP) is widely recognized as an inclusive and evidence-based method of involving stakeholders to gather information about potential new activities [3]. This helps in effectively targeting research and innovation policies [4]. The EDP methodology for developing skills in specific sectors takes a strategic approach to identifying and nurturing the skills required for the future, which is in line with the EU's strategy for intelligent, sustainable, and inclusive growth. The EDP methodology is utilized to identify and develop future skills needed for the Blue Economy, aligning with the EU's strategy for intelligent, sustainable, and inclusive growth.

In this project, the EDP serves as an inclusive and evidence-based approach to stakeholder engagement, generating insights into the gaps in skills and competencies presently limiting the growth and development of the Blue Economy.

In the context of the Blue Economy, specific stakeholder groups typically include:

- **Businesses**: Companies directly involved in activities such as aquaculture, shipbuilding, maritime logistics, and tourism services, as well as other related industries.
- **Government Bodies**: Local, regional, and national government agencies that regulate maritime activities, environmental protection, tourism, and commerce.
- **Educational Institutions**: Universities, vocational schools, and research institutes that focus on marine biology, maritime engineering, environmental science, and other relevant fields.
- **Industry Associations**: Associations that represent sectors such as fisheries, shipbuilding, maritime transport, and tourism.
- **Community Groups**: Non-profit organizations, local community groups, and NGOs that focus on environmental conservation, community development, or economic activities related to the sea.

This interactive process, driven by continuous interaction among businesses, knowledge institutes, and users, fosters the development of new ideas and discoveries. It emphasizes the importance of adaptability and collaboration in promoting innovation and growth within the Blue Economy.

The EDP is a dynamic and iterative approach that involves multiple phases, from preparation through execution to follow-up. The following steps can be applied to implement the EDP methodology and project effectively in the context of exploring the Blue Economy sector in Italy-Croatia.

2.1. EDP Preparation

- Delve into the sectors of the Blue Economy and explore innovation and entrepreneurial areas based on project applications. In our focus on the Blue Economy, we are targeting specific sectors of interest, particularly those outlined in Activity 2.2 (Implementation of pilot courses in blue skill education). These sectors include Aquaculture (ARTI), Nautical tourism (UNIZD), Maritime technologies and their application in the Blue Economy sectors (UNITS), Environmental protection

(VUS, OGS), Entrepreneurship initiative and funding, innovation management (FF), Circular economy, Digital transformation (CCE), and Technology transfer (UNIRI).

- List and explain the roles of different stakeholders in each sector. The selection should be based on the stakeholders' influence and impact within the industry, as well as their potential to contribute to or benefit from the project. We will use a standardized format to list the stakeholders to ensure consistency and comprehensiveness.
- Define the list of entrepreneurs who will participate in the process. Businesses play a key role in identifying and bridging skill gaps, with a primary focus on them.
- Select the entrepreneurs to confirm participation and assess their suitability for the project.
- Using the Quadruple Helix [5] model, identify other stakeholders from academia, industry, government, and civil society to bridge a skill gap in focused sectors and innovation/entrepreneurial areas.
- Contact other stakeholders from academia, industry, government, and civil society to confirm their participation and assess their suitability for the project.
- Identify at least 5 entrepreneurs and 1-2 other stakeholders
- Interview at least 5 entrepreneurs and 1-2 other stakeholders from academia, industry, government, and civil society per each of the 7 sectors identified in A2.2.

2.2. EDP Implementation

- Design and arrange meetings and interviews with key stakeholders, in particular representatives from academia, industry, government, and civil society, to collect insights and feedback on the Blue Economy sector.
- Collect and analyze data to document key findings, trends, and opportunities identified during the stakeholder engagement process.

2.3. Follow-up

- Monitor the progress of the EDP by tracking key result indicators, such as the number of identified stakeholders and the number of interviews completed.
- Assess the effectiveness of stakeholder engagement and the quality of insights gathered to evaluate the EDP's outcomes.
- Continuously involve stakeholders through brainstorming sessions and round tables.

3. Development of Data Collection Tools

In this section, we outline the comprehensive methods for collecting data for the project. These methods are designed to ensure thorough and accurate information gathering from relevant stakeholders.

3.1. Data Collection Methods

- Desk Research: Begin by conducting initial research to gather basic information about stakeholders. This includes the name of the institution or organization, contact information, stakeholder group (e.g., businesses, government bodies, educational institutions, industry associations, or community groups), an overview of the institution or organization (background, focus area, key activities), and their role in the focused sector.
- On-Site/Online Meetings & Questionnaire Administration: Organize face-to-face meetings with stakeholders to conduct interviews and run the questionnaire with the company's top management, owners, and other stakeholders from academia, industry, government, and civil society. A minimum of 30 interviews will be conducted in Italy and Croatia.

  Organize face-to-face or online meetings with stakeholders, including the company's top management, owners, and other key figures from academia, industry, government, and civil society.

During these meetings, a questionnaire—designed with both quantitative and qualitative questions—will be administered to collect structured feedback and quantitative data. This approach will streamline the process by allowing us to utilize the same opportunity of emails or calls (used to engage stakeholders) to distribute the questionnaire, either by adding the link into the email text or directly during the interviews. The goal is to define blue skill gaps and identify suitable education methods to address them. A minimum of 30 interviews will be conducted in Italy and Croatia.

3.2. Stakeholder Engagement

- List Key Stakeholders: Project partners will identify and list key stakeholders using specific criteria such as their impact on the project, company size, economic and social influence, and their role in policy-making. This step ensures that the most relevant and influential stakeholders are included in the data collection process
- Mobilize Quadruple Helix Stakeholders: To achieve a comprehensive and inclusive approach, we will actively engage a diverse range of stakeholders, including policymakers, academics, entrepreneurs, and representatives from civil society. Their participation is crucial for gathering a broad spectrum of data and perspectives that will enrich the project's outcomes.

3.3. Administration of Design Tools

- Develop and share detailed instructions with project partners: Responsible partners at VUS, UNIZD UNITS must provide detailed instructions for conducting meetings and administering questionnaires to ensure consistency and standardization in data collection.
- Conduct Meetings and Questionnaires: To effectively gather data and insights, project partners will engage with proposed stakeholders through meetings and questionnaires.

4. Data Analysis and Reporting

- Collecting and Analyzing Data: All partners should gather data from meetings, questionnaires, and other relevant sources and send it to the responsible partners for analysis. Each partner will input the collected data into a blank matrix, which the responsible partners (VUS, UNIZD, UNITS) will then distribute to all partnership participants. The gathered data will then be analyzed by the responsible partners, who will share the results with all involved parties.
- Brainstorming sessions: The responsible partners, assigned to specific sectors, will conduct brainstorming sessions during project meetings to identify current and future skill needs. These sessions will form the basis for developing targeted training programs and educational courses, ensuring alignment with the project's goals.
- Write a Report: After analyzing the data, the responsible partners, each assigned to specific sectors, will prepare a report that includes the analysis of conducted interviews. This report will summarize the key skills lacking in the sectors of the Blue Economy and provide recommendations for appropriate educational methods to address these gaps.

5. Additional Engagement Activities

Round tables: Organize two roundtable discussions with participants from academia, the private sector, and students focusing on the following topics: maritime tourism, aquaculture, and marine conservation. The roundtable discussions will facilitate dialogue on methods to enhance existing education and credentials, benefiting companies in their digital and green transformation while also preparing students to enter the workforce. These sessions must include an equal representation of experts, industry professionals, policymakers, and academics from both Italy and Croatia.

Conclusion

The methodology outlined in this document provides a comprehensive and structured approach to exploring and developing the Blue Economy within the context of Italy and Croatia. By using the EDP, we ensure inclusive and evidence-based stakeholder engagement, which is crucial for identifying gaps in skills and competencies and fostering innovation and sustainable growth. Our approach involves thorough preparation, targeted stakeholder selection, and meticulous data collection through desk research, on-site/online meetings, and structured questionnaires. We aim to engage a diverse range of stakeholders from businesses, government bodies, educational institutions, industry associations, and community groups to gather comprehensive insights that will inform the development of targeted training programs and academic courses. Emphasizing blue skills and their development is central to promoting sustainable development within the Blue Economy. Our iterative and dynamic process, including continuous stakeholder involvement and regular brainstorming sessions, will help us stay adaptable and responsive to emerging trends and challenges. Through careful analysis of the collected data and ongoing engagement activities such as round table discussions, we aim to provide actionable recommendations that will bridge existing skill gaps and support the growth and transformation of the Blue Economy sectors.

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