

She4Sea

Employability and entrepreneurial development of women in water-based blue economy sectors

Project number	KA220-VET-0AF7BCED
Work package No	2
Work package name	She4Sea Leadership, Entrepreneurial and Sustainability Competence Framework for women in the maritime sector.
Activity	A3
Title of the document	Report on Leadership competence/Entrepreneurial competence/Sustainability competence needs in (3) smart and green maritime sectors
Responsible	Militos Consulting S.A.
Date	November, 2023
Document type	Report
Distribution	Partnership

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Introduction

As part of the second work package (“She4Sea Leadership, Entrepreneurial and Sustainability Competence Framework for women in the maritime sector”), this report compiles the data collected by partners during the research phase, implemented at the beginning of the She4Sea project. During this phase, partners aimed at collecting both primary and secondary data with a two-fold goal:

- To gain a broader understanding on the two main topics explored by the She4Sea project:
 - (a) The role of women in three sectors of Blue Economy (i.e. maritime transport, fisheries & aquaculture, water-based tourism).
 - (b) The demand for soft skills within three competence areas (i.e. leadership, entrepreneurship, sustainability), crucial for pursuing a career in the aforementioned sectors.
- To collect up-to-date data reflecting the latest market needs and trends.

The current report, developed by Militos Consulting S.A., compiles the data regarding the second topic in focus (WP2/A3), namely the need in soft skills in three sectors of the Blue Economy (i.e. Maritime transport, Fisheries & Aquaculture, Water-based tourism). Another report on the gender aspect (WP2/A4) will be developed by HELMEPA. Findings from both reports will serve as guide for the development of the She4Sea training.

After having completed the data collection, the project partners in charge developed three national reports (one per country) presenting the research findings as well as information on the data collection process. The current report presents, compiles, and compares the information documented in these three reports with the aim to provide the reader with a comprehensive idea of the topic in focus. More details on the three national reports and the data collection process is presented in the following section.

Overall, this report consists of the following chapters:

- [Introduction](#): Preliminary information on the She4Sea research and the expected outcomes.
- [Data Collection Process](#): Description of the data collection process and presentation of the deployed research methods.
- [Results](#): Presentation of research results per country.
- [Conclusions](#): A comparative compilation of the research results per competence group.
- [Epilogue](#): A closing paragraph summarizing the report’s goal.

Data Collection Process

This chapter describes the data collection process, as implemented by project partners according to the methodology and templates created by both HELMEPA and Militos Consulting S.A. The collected data as well as information on the research process and results are presented in the three national reports (one per country), prepared by project partners in charge. As foreseen by the application form (hereinafter as “AF”), the research was conducted in Greece, Bulgaria, and Spain. The following table presents the partner in charge per country:

Country	Partner in Charge
Greece	HELMEPA
Bulgaria	NVNA
Spain	Sea Teach

The consortium agreed to some modifications to the design of both primary and secondary research, aiming to gain a broader understanding of the two main topics in focus:

- a) The role of women in three sectors of Blue Economy (i.e. maritime transport, fisheries & aquaculture, water-based tourism).
- b) The demand for soft skills within three competence areas (i.e. leadership, entrepreneurship, sustainability), crucial for pursuing a career in the aforementioned sectors.

To this end, the consortium agreed to the following actions:

1. In addition to the foreseen by the AF research methods (i.e. interviews/focus groups and desk research), partners designed and implemented an online survey.
2. In addition to desk research, partners included questions regarding the demand for soft skills in interviews and focus groups.

The consortium proceeded with these two changes with the aim of creating a pool of information that responds to the latest market needs. This will serve the future goal of developing high-quality and Blue Economy-appropriate training (WP3) for unemployed women.

The following table summarises the main information regarding the research process:

Country	No of Participants / Responses			Type of consulted documents
	Interviews	Focus Groups	Online Survey	
	(Primary Research)			(Secondary Research)
Greece	2	<ul style="list-style-type: none"> ▪ 1st F.G.: 3 ▪ 2nd F.G.: 6 	181	<ul style="list-style-type: none"> ▪ Press and social media resources, ▪ Academic and government publications and reports, ▪ Official websites on the three blue sectors and the blue economy in general.
Bulgaria	-	<ul style="list-style-type: none"> ▪ 1st F.G.: 6 ▪ 2nd F.G.: 10 	80	<ul style="list-style-type: none"> ▪ The National strategy for promotion of gender equality, ▪ The National Strategy for Promotion of Equality of Women, ▪ The Commission for Protection against Discrimination (CPD), ▪ A National Action Plan on Women, Peace and Security for the period 2020-2025, ▪ The Human Resources Development Program 2021-2027, ▪ The Nikola Vaptsarov Naval Academy official data for accepted students, distributed by gender, specialities and form of study, ▪ The Bulgarian Centre for Women in Technology (BCWT), ▪ The Friedrich Ebert Foundation.
Spain	5	<ul style="list-style-type: none"> ▪ 1st F.G.: 5 ▪ 2nd F.G.: 3 	86	<ul style="list-style-type: none"> ▪ The Spanish National Association of Nautical Enterprises (ANEN), ▪ Other official pages focusing on the maritime sector.
Total No	7	33	347	

It should be noted that partners could decide whether they implement one-to-one interviews or focus groups, taking into consideration participants' preferences. The KPI foreseen by the AF for both research methods was 10 participants per country (KPI: 30 in total), which partners exceeded (40 people participated in the three countries).

Regarding participants' profiles, partners ensured that people across the three blue economy sectors with different backgrounds and professional roles were involved. More specifically, the following list summarises the key characteristics of participants in the three countries:

- Both female and male participants were invited as foreseen by the AF.

- People belonging to both first and secondary target groups participated. Great attention was paid to people from the first target group, as partners deemed it crucial to invite women who, despite being currently unemployed for reasons such as parental leave, possess significant experience in the blue sectors in focus.
- Participants come from both academia and industry.
- Participants possess diverse roles of all levels across the three blue economy sectors.

The research methodology was accompanied by research tools (incl. interview and survey questionnaires, as well as templates for data collection) that facilitated the data collection process and ensured consistency in data documentation. These tools were thoroughly discussed during internal partners' meetings.

The research phase started in April 2023 and lasted on average 3 months. Revised versions of the national reports were prepared by partners' in charge according to consortium's feedback and when new relevant data came into light.

Results

This section presents the collected data regarding the needs in leadership, entrepreneurial, and sustainability competences within the three maritime sectors. The data will be presented per country; a comparative approach will be adopted in the following section “Results”. Each country-dedicated part presents findings from both (a) secondary and (b) primary research.

Greece

Secondary Research

There is a notable scarcity of secondary data addressing the identification, categorization, and cultivation of soft skills essential in the maritime sector. At the same time, training opportunities have traditionally overlooked the underrepresentation of women in the maritime industry and the specific challenges they face. As the report explains, only recently has this issue begun to attract attention from industry organizations and representatives. Five indicative examples of such trainings are mentioned in the national report:

- A training programme by WISTA promoting the development of interpersonal and leadership skills that enable women to cope with workplace challenges (“Full ahead”);
- A training by GFCM-FAO, FEAP and HAPO, familiarising trainees with sustainable practices in aquaculture that enable women to undertake leadership roles in the aquaculture sector (“Empowering Women Towards Sustainable Aquaculture Development”);
- A training by WISTA & ALBA focusing on the development of leadership skills (“Women in Leadership”).
- A program by HELMEPA on the soft skills development (“Empowering the Human Element in Shipping”).
- The training ““Innovative soft skills to Maritime Education and Training” focusing among other on cultural awareness and multiculturality.

Primary Research

The following table presents the primary data as provided by the Greek national report. Information obtained from focus groups and interviews is categorized into three competence areas while survey data describes the need in soft skills across all three sectors. It is crucial to note that the survey findings are listed in order of priority.

	Leadership	Sustainability	Entrepreneurship
Focus Groups & Interviews	<ul style="list-style-type: none"> Adaptability, Resilience, Time management, Flexibility. 	<ul style="list-style-type: none"> Foundational knowledge*, Strong leadership, Ability to identify strategic opportunities, Creativity, Problem-solving, Forward-thinking, Basic data skills, Communication. 	<ul style="list-style-type: none"> Financial literacy**, Professional rights.
	<ul style="list-style-type: none"> Communication, Networking, Empathy, Interpersonal skills. 		
Survey	<ul style="list-style-type: none"> Teamwork & Collaboration 		
	<ul style="list-style-type: none"> Problem solving, Communication, Organizational skills. 		
	<ul style="list-style-type: none"> Leadership skills, Empathy. 		

*Explained as: “Basic understanding of environmental science & climate change”

**Explained as: “The knowledge and skills needed to make important financial decisions”

Other interesting finding by the survey and interview/focus group participants:

- Leadership skills were unanimously identified as enablers for women’s employability and professional progress within all three sectors. As explained, these skills are required for women to establish their presence and defeat stereotypes and the reluctance of their male peers. They also enable women increase their visibility, especially regarding upper management positions.
- Soft skills were deemed the most crucial skill set in the maritime industry by 88.8% of survey participants, surpassing the importance even of technical hard skills, which were rated at 69.8%.
- Participants in the survey expressed a strong preference for training centered around soft skills development and sustainability competences (e.g. "Introduction to Soft Skills", "Sustainability in Shipping").
- There is a gap between requirements of the shipping industry and soft skills acquired by employees in the maritime industry.

Bulgaria

Secondary Research

The desk research conducted in Bulgaria identified lack of official data regarding the demand for soft skills within the three competency areas. This data gap is also notable in terms of women's employability in the maritime sector. In the same vein, the secondary research revealed absence of relevant initiatives, policies, and awareness raising campaigns at a national level.

Primary Research

The collected primary data highlight the importance of leadership skills for a career in the maritime sector as well as in blue economy in general. Participants discussed the leadership competence thoroughly, referring not only to the skills that a good leader shall have but also to skills that women have and considered a key asset for a leading position within blue economy.

It is important to underline that participants strongly believe that skills that are human-centered are more important than technical ones when it comes to the three blue economy sectors in focus. Particularly for managerial/decision-making positions, soft skills are key because of the high level of diversity within the workplace. The following table depicts the skills presented by participants in Bulgaria. Please note that the survey data is presented in order of priority.

	Leadership	Sustainability	Entrepreneurship
Focus Groups & Interviews	<ul style="list-style-type: none"> ▪ Logical thinking, ▪ Intuitive thinking, ▪ Creative thinking, ▪ Multicultural skills, ▪ Sustainability/resilience. 	<ul style="list-style-type: none"> ▪ Resilience/Perseverance 	(No comments were shared by participants.)
Survey	<ul style="list-style-type: none"> ▪ Teamwork & Collaboration ▪ Effective communication, ▪ Organizational skills, ▪ Adaptability, ▪ Problem solving, ▪ Stress management, ▪ Decision-making, ▪ Critical thinking. 		

Other interesting findings revealed through the primary research in Bulgaria:

- As mentioned earlier, the ability to work in multicultural and diverse workplaces is a key asset for maritime job positions, especially for the top management ones.
- Entrepreneurial skills were difficult for interpretation and understanding by the interviewed and no trustful data was accumulated. This finding shall be taken into consideration by participants when designing the She4Sea training.
- Sustainability was mostly perceived as a psychological trait describing the ability to become resilient and continue being efficient and successful despite the challenges.

Spain

Secondary Research

The secondary research in Spain focused on the soft skills within the competence areas of Sustainability and Entrepreneurship. The following table presents the in-demand skills:

	Sustainability	Entrepreneurship
Desk research	<ul style="list-style-type: none"> ▪ Sustainable communication* ▪ Green marketing 	<ul style="list-style-type: none"> ▪ Business idea development ▪ Problem-solving ▪ Impact measurement ▪ Embracing innovation ▪ Adaptability** ▪ Time management*** ▪ Organisational skills***

*Sustainable communication describes the ability to contribute and debate for a better ecological, economic, and social life.

**In the competence of entrepreneurship, adaptability means the ability to respond to the changing market conditions, consumer demands, and technological advancements in order to remain competitive and seize new opportunities.

***Effective time management skills assist entrepreneurs in prioritizing tasks, meeting deadlines, and increasing productivity while organizational abilities help them to run business operations smoothly and efficiently.

Primary Research

The following table presents the primary data collected through the research in Spain. The table splits into two parts; the first one depicts data collected through focus groups/interviews and the other through the online survey. Although participants were asked about all the three sectors in focus, the majority of them focus their responses on the water-based tourism and specifically on yachting and shipping sector. As in the previous tables, survey skills are listed in order of priority:

	Leadership	Sustainability	Entrepreneurship
Focus Groups & Interviews	<ul style="list-style-type: none"> Communication*, Negotiation and persuasion*, Critical thinking, Data-driven decision making, People skills, Customer service skills, Copying with unpleasant situations**, Ability to stand up for yourself**. 	(Lack of comments by participants regarding the entrepreneurial and sustainability skills.)	(Lack of comments by participants regarding the entrepreneurial and sustainability skills.)
Survey	<ul style="list-style-type: none"> Decision making, Problem solving, Teamwork, Organizational skills, Adaptability. 		

Other interesting finding revealed through primary research in Spain:

- Participants emphasized on women’s ability to communicate clearly and directly when discussing with superiors, especially in a male-dominant environment. It is the power of communication, together with the power of negotiation and persuasion that could enable women to discuss new roles and responsibilities as well as achieve better working conditions.
- These skills are particularly important for women that are active in male-dominated job positions (e.g. yacht rigger). More specifically, participants have faced unpleasant situations, when customers (mainly men) undermine their ability to perform certain tasks.
- There was lack of comments by participants regarding the entrepreneurial and sustainability skills.

Based on partners’ comments and secondary research findings the following skills were also highlighted, especially for leadership roles:

	Leadership
Focus Groups/ Interviews & Desk Research	<ul style="list-style-type: none"> Conflict and opposition management, Ability to influence others and get results, Ability to prioritise your values, Ability to set boundaries.

Conclusions

This section compiles the conclusions drawn in the three national reports regarding the soft skills within the three competence areas in focus. Instead of presenting conclusions country-by-country, a comparative approach is employed to enable the reader to gain comprehensive understanding of the subject.

Leadership Competence

In all three countries, participants unanimously agreed to the importance of leadership in the three blue sectors. Particularly regarding male-dominated job positions, leadership skills enable women to not only stand up for themselves and effectively respond to degrading comments and undermining behaviours but also communicate their achievements and increase the possibilities of getting a promotion. The following table presents per country the skills that fall into the category of leadership.

Leadership Competence			
	Greece	Bulgaria	Spain
Focus Groups & Interviews	<ul style="list-style-type: none"> ▪ Adaptability, ▪ Resilience, ▪ Time management, ▪ Flexibility, ▪ Communication, ▪ Networking, ▪ Empathy, ▪ Interpersonal skills. 	<ul style="list-style-type: none"> ▪ Logical/Critical thinking, ▪ Intuitive thinking, ▪ Creative thinking, ▪ Multicultural skills, ▪ Sustainability/resilience. 	<ul style="list-style-type: none"> ▪ Communication, ▪ Negotiation and persuasion, ▪ Critical thinking, ▪ Data-driven decision making, ▪ People skills, ▪ Customer service skills, ▪ Coping with unpleasant situations, ▪ Ability to stand up for yourself.
Desk Research	<ul style="list-style-type: none"> ▪ Interpersonal skills, ▪ Multicultural skills. 	(Lack in data on soft skills within all three competence groups.)	<ul style="list-style-type: none"> ▪ Conflict and opposition management, ▪ Ability to influence others and get results, ▪ Ability to prioritise your values, ▪ Ability to set boundaries.

- ✓ Regarding the data collected through focus groups and interviews, **resilience**, **communication**, and **logical/critical thinking** are the skills mentioned by participants in at least two countries.
- ✓ The secondary data underlines the importance of **interpersonal** and **multicultural** skills (also mentioned by participants in Bulgaria) and **conflict and management** skills. In addition, a good leader shall be able to **influence others**, **set boundaries**, and **prioritise her values**.

Sustainability Competence

The following table present the data on soft skills within sustainability competence:

Sustainability Competence			
	Greece	Bulgaria	Spain
Focus Groups & Interviews	<ul style="list-style-type: none"> ▪ Foundational knowledge, ▪ Strong leadership, ▪ Ability to identify strategic opportunities, ▪ Creativity, ▪ Problem-solving, ▪ Forward-thinking, ▪ Basic data skills, ▪ Communication. 	<ul style="list-style-type: none"> ▪ Resilience 	There was lack of comments by participants regarding sustainability skills.
Desk Research	(Lack in data on soft skills within sustainability competence.)	(Lack in data on soft skills within all three competence groups.)	<ul style="list-style-type: none"> ▪ Sustainable communication, ▪ Green marketing.

- ✓ Interestingly, participants in both Spain and Bulgaria seemed to be unfamiliar with the concept of sustainability. As suggested in both reports, this result shall be taken into consideration by partners when designing the She4Sea training.
- ✓ In Greece, participants elaborated on the concept of sustainability emphasising the importance of having the adequate skills to remain competitive as the sector undergoes a green transition. The fact that participants in Greece, in contrast to Spain and Bulgaria, were familiar with the sustainability skills might be explained based on their professional profiles; while participants in both Bulgaria and Spain are active professionals in blue economy, some participants in Greece were HR and skill experts. Either this explanation is valid or not, there is urgent need to raise awareness among professionals in blue economy about the green transition and the changes in behaviour and mindset required to achieve it.
- ✓ It should be noted that although participants in Bulgaria did not comment on sustainability in environmental terms, they discussed about the need to remain sustainable under challenging working conditions. This need for resilience within blue economy (especially for women) shall be also taken in consideration for the development of the She4Sea training.
- ✓ In Spain, the desk research revealed the importance of sustainable communication and green marketing, namely the ability to contribute, debate, and raise awareness for a better ecological, economic, and social life.

As suggested by the AF, these results will enrich the EU GreenComp framework (i.e. competence framework on sustainability) and adapt it to the market needs of the Blue Economy sectors in focus¹. To this end, the framework is modified as follows:

¹ Also suggested by the GreenComp report in the section “Limitations”. To consult the report, click [here](#).

The EU GreenComp framework	Suggested Modifications (based on the She4Sea research)	Final Version of Framework (Adapted to market needs of Blue Economy)
Embodying sustainable values		
Valuing sustainability		
Supporting fairness		
Promoting nature		
Embracing complexity in sustainability		
Systems thinking	∨	Systems thinking
Critical thinking		
Problem framing	∨ (together with problem-solving)	Problem framing and problem solving
Envisioning sustainable futures		
Futures literacy	∨	Futures literacy
Adaptability		
Exploratory thinking	∨ (emphasis on creativity)	Exploratory and creative thinking
Acting for sustainability		
Political agency		
Collective action		
Individual initiative		
	Communication & Sustainable communication	Communication & Sustainable communication
	Strong leadership skills	Strong leadership skills
Other		
	Basic data skills	Basic data skills
	Green marketing	Green marketing

- ✓ The third column presents the GreenComp framework as it is modified after the She4Sea research findings have been incorporated. Partners are encouraged to use this information when designing the project training.

Entrepreneurship Competence

The following table present the data on soft skills within entrepreneurship competence:

Entrepreneurship Competence			
	Greece	Bulgaria	Spain
Focus Groups & Interviews	<ul style="list-style-type: none"> Financial literacy, Professional rights. 	There was lack of comments by participants regarding entrepreneurial skills.	There was lack of comments by participants regarding entrepreneurial skills.
Desk Research	(Lack in data on soft skills within entrepreneurship competence.)	(Lack in data on soft skills within all three competence groups.)	<ul style="list-style-type: none"> Business idea development, Problem-solving, Impact measurement, Embracing innovation, Adaptability, Time management, Organisational skills.

- ✓ Similarly to sustainability competence, partners in both Bulgaria and Spain did not comment on entrepreneurship skills.
- ✓ In Greece, participants considered finance skills (e.g. budgeting, financial analysis, problem-solving, risk assessment, financial planning) as essential for a woman wishing to pursue a career in blue economy as entrepreneur. In addition, they highlighted the importance of being aware about their basic professional rights.
- ✓ In Spain, the desk research revealed a list of significant entrepreneurship skills, as depicted in the table.

As suggested by the AF, these results will enrich the EU EntreComp framework² (i.e. competence framework on entrepreneurship) and adapt it to the market needs of the blue economy sectors in focus. To this end, the framework is modified as follows:

² You can consult the report [here](#).

The EU EntreComp framework	Suggested Modifications (based on the She4Sea research)	Final Version of Framework (Adapted to market needs of Blue Economy)
Ideas and opportunities		
Spotting opportunities	∨ (under the “Business idea development” skill)	Business idea development (incl. spotting opportunities & creativity)
Creativity		
Vision	∨ (incl. problem solving)	Vision (incl. problem solving)
Valuing ideas		
Ethical and sustainable thinking		
	Embracing innovation	Embracing innovation
Resources		
Self-awareness		
Self-efficacy		
Motivation and perseverance		
Mobilising resources		
Financial and economic literacy	∨	Financial and economic literacy
Mobilising others		
Into action		
Taking the initiative		
Planning and management	∨ (also considering the time axis)	Planning, organization, and time management
Coping with uncertainty, ambiguity and risk		
Working with others		
Learning through experience		
	Adaptability	Adaptability
	Impact measurement	Impact measurement
Other		
	Professional rights	Professional rights

- ✓ The third column presents the EntreComp framework as it is modified after the She4Sea research findings have been incorporated. Partners are encouraged to use this information when designing the project training.

Other soft skills

The following table presents that need in soft skills across all three competence areas and blue sectors. The information is collected through the online survey:

Soft skills			
	Greece	Bulgaria	Spain
Survey	<ul style="list-style-type: none"> ▪ Teamwork & Collaboration, ▪ Problem solving, ▪ Communication, ▪ Organizational skills, ▪ Leadership skills, ▪ Empathy. 	<ul style="list-style-type: none"> ▪ Teamwork & Collaboration, ▪ Effective communication, ▪ Organizational skills, ▪ Adaptability, ▪ Problem solving, ▪ Stress management, ▪ Decision-making, ▪ Critical thinking. 	<ul style="list-style-type: none"> ▪ Decision making, ▪ Problem solving, ▪ Teamwork & Collaboration, ▪ Organizational skills, ▪ Adaptability.

- ✓ When comparing the survey data, the two most important skills for a career in the Blue Economy sectors are **teamwork & collaboration** and **problem-solving** (both ranked in the top three positions in at least two countries).

Epilogue

This report has been delivered by Militos Consulting S.A. to present what are the most in-demand skills for the three blue economy sector in focus (i.e. Maritime transport, Water-based tourism, Fisheries & Aquaculture). It compiles data collected by both primary and secondary research conducted by project partners (HELMEPA in Greece, NVNA in Bulgaria, and Sea Teach in Spain) at the beginning of the She4Sea project. The findings aim to guide the development of the She4Sea Competence Framework and Compendium, one of two main results of WP2. This framework will, in turn, serve as the foundation for the She4Sea training in WP3.