



INTERREG ITALY-CROATIA
Programme 2021 – 2027

Smart and innovative blue skills for competitive blue economy MareSkill

D.2.2.3. Report on conducted 4 pilot courses



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Project identification

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

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Activity description: The report from conducted pilot courses in which previously developed education materials for new educational methods was developed will contain all the gathered stakeholders' feedback, information, and conclusions from this activity.

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1. Introduction

The MareSkill project, carried out under the Interreg Italy–Croatia Programme, aims to enhance skills development in key sectors of the Blue Economy by promoting cross-border cooperation among higher education institutions, innovation ecosystems, and industry stakeholders.

Within Work Package 2, partners jointly carried out pilot training programs under Output 2.1 – Jointly implemented pilot courses for upskilling and reskilling in the Blue Economy. These pilot activities serve as the practical validation of newly developed micro-credential curricula designed to meet emerging needs in sustainability, digital transformation, aquaculture management, innovation commercialization, and nautical tourism.

By bringing together participants from Croatia and Italy in academic, innovation-driven, and industry-focused environments, MareSkill transformed strategic educational development into tangible learning experiences that meet the changing needs of marine and coastal sectors.

2. Overview of Pilot Courses Implemented

The pilot phase marked the transition of MareSkill micro-credential programmes from curriculum design to practical implementation. Table 1 provides an overview of the five pilot implementations, showing how the developed training paths were tested in different learning environments, including universities, innovation-oriented training settings, professional events and sector-specific contexts.

The project planned the organization of four jointly implemented pilot courses with a target of 40 participants. During implementation, the partnership delivered the planned pilot activities and also tested one of the developed programs in a second territorial context. In total, five pilots were carried out in Croatia and Italy.

The pilot courses covered different Blue Economy themes, including sustainability and digitalisation, technology transfer and commercialisation, entrepreneurship and funding, aquaculture management, and sustainable nautical tourism.

The first pilot was implemented in Trieste by PP8 UNITS and focused on sustainability, digitalisation and innovation in the Blue Economy. The second implementation took place in Šibenik within InnovaMare Academy 3.0, where two MareSkill micro-credential programmes were delivered:



Essentials of Technology Transfer and Commercialization, led by PP3 UNIRI, and Blue Horizon Accelerator for Next-Gen Economies, led by PP5 FF.

Table 1. Overview of conducted pilot courses and participants included in the target value

No.	Pilot name	Responsible partner(s)	Location	Date
1	Sustainability and Digitalization in the Blue Economy	PP8 UNITS (IT)	Trieste, Italy	20–26 July 2025
2	Essentials of Technology Transfer and Commercialization + Blue Horizon Accelerator for Next-Gen Economies, implemented within InnovaMare Academy 3.0	PP3 UNIRI (HR) + PP5 FF (IT)	Šibenik, Croatia	13–18 October 2025
3	Quality Aquaculture – Management and Sustainable Practices	PP6 ARTI (IT) + University of Bari	Bari, Italy	23–24 October 2025
4	Sustainable Practices in Nautical Tourism with Emphasis on Skippers and Environmental Protection	PP2 UNIZD (HR)	Biograd na Moru, Croatia	22–24 October 2025
5	Blue Horizon Accelerator for Next-Gen Economies, additional pilot implementation	PP5 FF (IT)	Padua, Italy	25–26 November 2025

The third pilot was implemented in Bari by PP6 ARTI in cooperation with the University of Bari and focused on sustainable aquaculture management, quality certification and cooperation within the aquaculture sector.

The fourth pilot was implemented by PP2 UNIZD during the Biograd Boat Show and addressed sustainable practices in nautical tourism, with emphasis on skippers and environmental protection.

The fifth implementation was an additional pilot delivery of Blue Horizon Accelerator for Next-Gen Economies in Padua, organised by PP5 FF. It used the same curriculum previously delivered in Šibenik, but with a different group of participants and in a different territorial context, providing additional evidence of the transferability of the developed micro-credential programme.





Figure 1. MareSkill pilot training in Trieste



Figure 2. MareSkill pilot training in Šibenik





Figure 3. MareSkill pilot training in Bari



Figure 4. MareSkill pilot training in Biograd na Moru





Figure 5. MareSkill pilot training in Padua

3. Involvement of Partners from Both Countries

The MareSkill pilot courses were implemented through cooperation between Croatian and Italian partners. This cooperation covered the preparation of curricula and learning materials, organisation of pilot activities, delivery of thematic sessions, stakeholder engagement, digital learning support and certification of learning outcomes.

Croatian partners contributed through coordination, academic delivery, stakeholder outreach and implementation of pilot activities in Croatia. LP1 VUS (HR) coordinated the overall implementation process and hosted the Šibenik pilot activities within InnovaMare Academy 3.0. PP3 UNIRI (HR) delivered the programme on technology transfer and commercialisation, while PP2 UNIZD (HR) implemented the pilot course focused on sustainable nautical tourism and environmental protection. PP4 CCE (HR) supported communication with target groups, stakeholder engagement and visibility activities.

Italian partners contributed through thematic expertise, pilot delivery in Italy, innovation-oriented training and digital learning support. PP8 UNITS (IT) implemented the pilot course on sustainability



and digitalisation in the Blue Economy. PP5 FF (IT) delivered the Blue Horizon Accelerator programme in both Croatia and Italy, focusing on entrepreneurial skills, innovation management and funding strategy development. PP6 ARTI (IT), in cooperation with the University of Bari, implemented the pilot course on sustainable aquaculture management and quality practices. PP7 OGS (IT) contributed with expertise related to marine and coastal sustainability, environmental monitoring and applied knowledge in the Blue Economy.

The cross-border dimension was also reflected in the use of common project tools. Educational materials were made available through the Moodle learning environment, while digital micro-credential certificates were issued through the Pearson Credly platform. This supported a common implementation framework and enabled comparable recognition of learning achievements across different institutional settings.

The involvement of partners from both countries strengthened the quality of the pilot phase by combining academic knowledge, innovation support, industry-oriented experience and practical learning environments across the Italy-Croatia cooperation area.

4. Analytical Overview of Participants Included in Target Value

As presented in Table 1, the MareSkill pilot courses included 84 participants in the target value, which is more than twice the originally planned target of 40 participations. The participants came from both countries of the cooperation area: 35 from Croatia and 49 from Italy.

The highest number of participants was recorded in the pilot course Quality Aquaculture – Management and Sustainable Practices in Bari, with 28 participants. This was followed by Sustainability and Digitalization in the Blue Economy in Trieste, with 23 participants, and the nautical tourism pilot in Biograd na Moru, with 18 participants. The Šibenik implementation within InnovaMare Academy 3.0 included 9 participants, while the additional pilot implementation of Blue Horizon Accelerator for Next-Gen Economies in Padua included 6 participants.

The overall distribution shows that the pilot phase reached participants from both sides of the Italy-Croatia cooperation area. Italian participants were particularly represented in the pilots implemented in Trieste and Bari, while Croatian participants were more represented in the pilots implemented in Biograd na Moru and Padua. The Šibenik implementation included participants from



both countries and supported the testing of two micro-credential programmes in the same learning environment.

Participants came from different backgrounds relevant to Blue Economy skills development, including students, young professionals, researchers, higher education representatives, innovation actors and stakeholders connected with maritime, aquaculture, nautical tourism and entrepreneurship-related fields. This diversity supported the practical validation of the developed training paths and enabled feedback from participants with different educational, professional and sectoral perspectives.

The achieved participation confirms strong interest in the developed micro-credential programmes and demonstrates the relevance of the topics selected through the MareSkill project. It also shows that the pilot courses successfully contributed to strengthening cross-border skills development in the Blue Economy.

5. Feedback Mechanism and Quantitative Results

Participant feedback was collected through an anonymous online questionnaire implemented in Microsoft Forms. The questionnaire was distributed to all participants included in the target value after the pilot activities, in order to assess their satisfaction with the training and to collect suggestions for improving future editions of the MareSkill micro-credential programmes.

The questionnaire included six closed questions using a five-point scale, from “Very dissatisfied” to “Very satisfied”, and two open questions. The closed questions focused on overall satisfaction, relevance of the content, quality of learning materials, clarity and effectiveness of trainers, usefulness of the knowledge gained, and organisation and delivery of the training. The open questions asked participants what they liked most about the training and what could be improved in future editions. The questionnaire template is provided in Appendix 1.

In total (as presented in Table 2), the questionnaire was distributed to 84 participants, meeting the target value, and 49 completed responses were collected. This represents a response rate of 58.3%. The responses covered all implemented pilot activities, providing feedback from participants involved in different thematic areas and learning environments.

The results from Table 3 show consistently high satisfaction across all pilot implementations. The overall average score was 4.41 out of 5, while the average scores by pilot ranged from 4.26 to 4.56.



The highest average score was recorded for the Padua pilot, followed by the Trieste and Bari implementations.

Across all closed-question responses, 94.6% were marked as either “Satisfied” or “Very satisfied”. The strongest overall results were recorded for overall satisfaction and organisation and delivery of the training, both with an average score of 4.49 out of 5. The quality of learning materials and clarity of trainers were also highly evaluated.

The Šibenik implementation shows slightly lower, but still positive, scores for the quality of learning materials and usefulness of the knowledge gained. This is consistent with open feedback suggesting more time for mentoring, practical work, project preparation and interaction with experts.

Table 2. Overview of distributed questionnaires and collected responses

Pilot implementation	Questionnaires distributed	Completed responses collected	Response rate
Sustainability and Digitalization in the Blue Economy, Trieste	23	12	52,2%
InnovaMare Academy 3.0, Šibenik	9	9	100,0%
Quality Aquaculture – Management and Sustainable Practices, Bari	28	12	42.9%
Sustainable Practices in Nautical Tourism with Emphasis on Skippers and Environmental Protection, Biograd na Moru	18	10	55.6%
Blue Horizon Accelerator for Next-Gen Economies, Padua	6	6	100.0%
Total	84	49	58,3%



Table 3. Average feedback scores by pilot implementation

Evaluation criterion	Trieste	Šibenik	Bari	Biograd na Moru	Padua	Overall average
Overall satisfaction with the training programme	4,67	4,56	4,42	4,30	4,50	4,49
Relevance of the content to participants' interests and needs	4,33	4,00	4,50	4,30	4,67	4,37
Quality of the learning materials provided	4,67	3,89	4,33	4,20	4,50	4,41
Clarity and effectiveness of trainers/lecturers	4,67	4,00	4,42	4,10	4,67	4,43
Usefulness of the knowledge gained for studies or professional development	4,17	3,89	4,58	4,20	4,50	4,31
Organisation and delivery of the training	4,58	4,22	4,42	4,40	4,50	4,49
Average by pilot	4,51	4,26	4,44	4,32	4,56	4,41

6. Validation Methodology and Outcomes

The validation of each pilot course was carried out by the partner responsible for its implementation. Each responsible partner reviewed the available implementation evidence and feedback collected during and after the pilot activities against the following criteria. The following types of evidence were used:

- **Pilot course programmes and agendas** - These documents confirmed the planned structure, duration, thematic focus and delivery format of each pilot activity.
- **Attendance records** - Attendance sheets confirmed participant involvement and provided the basis for the analytical overview of participants included in the target value.
- **Developed learning materials** - Educational materials prepared within the Moodle LMS were used during the pilot courses and made available through the project learning environment.
- **Participant feedback questionnaire** - Anonymous feedback was collected through an online questionnaire implemented in Microsoft Forms. The questionnaire template is provided in Appendix 1.
- **Partner reports on pilot implementation** - Individual partner reports provided information on the organisation, delivery, partner involvement, participant structure and implementation experience of each pilot course.



- **Digital micro-credential evidence** - Digital badges and certificates issued through the Pearson Credly platform provided evidence of the recognition of learning achievements.
- **Partner reflections and implementation review** - After the pilot activities, partners reviewed the implementation experience, participant feedback and identified improvement points for future editions of the training programmes.

7. Lessons Learned and Recommendations

The pilot phase showed that short, focused training formats are well suited for Blue Economy topics when they are built around concrete skills and practical situations. Participants were most engaged when the courses moved beyond general explanations and allowed them to connect the subject with real examples, professional challenges or project ideas.

A clear lesson is that preparation matters. Future editions should provide selected materials before the start of the course, especially when the topic includes technical, business or regulatory content. This would allow participants to arrive with a basic understanding of the subject and would leave more time during the course for discussion, exercises and applied work.

The pilots also showed that mentoring and guided interaction should be strengthened. Several activities benefited from expert input and teamwork, but future versions could reserve more time for individual questions, group feedback and direct exchange with trainers or sector representatives.

Another recommendation is to use more examples from the Italy–Croatia area. Local and regional case studies would make the courses easier to relate to and would help participants compare different approaches in the same cooperation area.

Finally, the digital micro-credential format should be kept and further developed. Digital badges make the learning achievement visible and easy to share, while the modular structure allows the programmes to be reused separately or combined into broader training paths.

8. Capitalisation and Sustainability of Results

The pilot implementation of MareSkill micro-credential programmes did not represent an isolated educational activity, but a continuation and further development of existing cross-border cooperation in the Blue Economy. The project was built on previously established collaboration



among higher education institutions, innovation actors, public bodies, and sector stakeholders, using these networks to test, validate, and strengthen newly developed educational content.

Capitalisation was achieved by embedding the programmes into already recognised learning and innovation environments, such as established academy formats, summer school models, sector events, and partner-led training settings. This approach enabled the project to avoid duplication of structures while increasing the practical relevance, visibility, and outreach of the developed curricula.

A key added value of the MareSkill approach lies in the modular structure of the micro-credential programmes. Their design allows individual learning units to be reused, adapted, and combined according to the needs of different institutions, target groups, and Blue Economy sectors. The use of digital learning tools and certification mechanisms further supports the transferability and long-term applicability of the results.

The pilot experience confirmed that the developed educational materials and methodologies can be applied across different national, institutional, and professional contexts. This creates a strong basis for future integration of the programmes into regular educational offers, lifelong learning schemes, professional training initiatives, and innovation-oriented capacity-building activities.

In this way, MareSkill capitalises on previous initiatives while creating new opportunities for sustainable skills development in the Blue Economy. The results can continue to support upskilling and reskilling processes beyond the project duration, contributing to stronger cooperation, improved educational responsiveness, and long-term competitiveness of the Italy–Croatia cooperation area.

9. Conclusions

The MareSkill pilot courses confirmed that the developed micro-credential programmes offer a useful and adaptable format for Blue Economy skills development. The courses were delivered in Croatia and Italy and covered a wide range of topics, from sustainability and digitalisation to aquaculture, nautical tourism, technology transfer, entrepreneurship and funding.

The implementation showed that the programmes can function in different learning environments and with different participant profiles. Feedback from participants confirmed that the courses were relevant, well received and useful for further educational or professional development.



The pilot phase also provided clear guidance for future improvements. More time should be dedicated to practical work, mentoring, discussion and networking, while learning materials and case studies should be prepared in a way that supports active participation from the start.

Overall, the pilot implementation provided strong evidence that the MareSkill micro-credential model can support targeted upskilling and reskilling in the Blue Economy. The results create a solid basis for further use, adaptation and promotion of the developed programmes by project partners and relevant stakeholders.

Appendix 1 - Feedback Questionnaire Template

The following questionnaire was used to collect anonymous feedback from participants after the pilot activities. The questionnaire was implemented online through Microsoft Forms.

Please rate each aspect on a scale from 1 (lowest) to 5 (highest) in response to the following questions. The survey is anonymous and will take only a few minutes to complete.

Overall satisfaction with the training programme

Very dissatisfied / Dissatisfied / Neutral / Satisfied / Very satisfied

Relevance of the content to your interests and needs

Very dissatisfied / Dissatisfied / Neutral / Satisfied / Very satisfied

Quality of the learning materials provided

Very dissatisfied / Dissatisfied / Neutral / Satisfied / Very satisfied

Clarity and effectiveness of trainers/lecturers

Very dissatisfied / Dissatisfied / Neutral / Satisfied / Very satisfied





Usefulness of the knowledge gained for your studies or professional development

Very dissatisfied / Dissatisfied / Neutral / Satisfied / Very satisfied

Organisation and delivery of the training

Very dissatisfied / Dissatisfied / Neutral / Satisfied / Very satisfied

What did you like the most about the training?

Open answer

What would you suggest to improve in future editions?

Open answer



References

Project social media channels:

- MareSkill LinkedIn page:
 - <https://www.linkedin.com/feed/update/urn:li:activity:7368954781693911041>;
 - <https://www.linkedin.com/feed/update/urn:li:activity:7384275029146038272>;
 - <https://www.linkedin.com/feed/update/urn:li:activity:7391558482111528960>;
 - <https://www.linkedin.com/feed/update/urn:li:activity:7391152671459733504>;
- MareSkill Facebook page:
 - <https://www.facebook.com/mareskillinterregitalycroatia/posts/pfbid0285apUYysnbaonJnbPUT9grRKAButLeFLXV2m819ehWHuBPGaz2a2piYxcNWgfYxAI>;
 - <https://www.facebook.com/mareskillinterregitalycroatia/posts/pfbid022z4VAu2dnFr5ASneKpTEuQkT2r4eQRRvDQeRePoB96R7LK4Sy4HYsSETknBd1VgTI>;
 - <https://www.facebook.com/mareskillinterregitalycroatia/posts/pfbid02dYiow4wggw4ZRo3hA58qgVtusSegyiqDdqkKkLo6VbQ5daTYz3MDWQqBxgPoxNADGI>;
 - <https://www.facebook.com/mareskillinterregitalycroatia/videos/678524451694911/>;

Web coverage:

- Project web:
 - <https://www.italy-croatia.eu/web/mareskill/dettaglio?articleId=26857311&groupId=7943331>;
 - <https://www.italy-croatia.eu/web/mareskill/dettaglio?articleId=27593299&groupId=7943331>;
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