ANNEX 1 – "QUALITY AQUACULTURE - MANAGEMENT AND SUSTAINABLE PRACTICES" PILOT COURSE PROGRAMME

Program Title
QUALITY AQUACULTURE - MANAGEMENT AND SUSTAINABLE PRACTICES

Name and type of Organisation delivering the course
University of Bari "Aldo Moro" Department of Veterinary Medicine (in collaboration with ARTI – Regional Agency for Technology, Technological Transfer and Innovation)

Language
Italian, English

Delivery method
In-person

Target audience
The Course on Quality Aquaculture is addressed to graduates, operators in the primary production and processing sector and at researchers and doctoral students. In order to ensure a high quality of teaching and a good level of interaction the maximum number of participant admitted is 20 from Italy and Croatia. The selection will take place according to the methods indicated in the open call.

Entry qualification
Participants should have a qualification equivalent to at least EQF Level 4. Prior basic knowledge or experience in aquaculture, fisheries, marine biology, environmental management, or business is recommended but not mandatory.

Duration
50 hours

Sector
Aquaculture
The program focuses primarily on the Aquaculture sector within the Blue Economy, emphasizing innovative, sustainable practices and environmental protection techniques. It equips participants with transversal skills applicable broadly to sustainability and environmental management across other Blue Economy sectors.

Qualification Framework Level: EQF Level 5

This micro-credential is aligned with EQF Level 5, reflecting its suitability not only for students in formal education but also for professionals, lifelong learners, or individuals seeking specialized knowledge and skills in sustainable aquaculture. EQF Level 5 ensures flexibility, practical orientation, and accessibility for participants with diverse backgrounds and professional experiences.

Credit Allocation

2 ECVET / ECTS credits

The micro-qualification corresponds to approximately 50 to 60 hours of total workload, including lectures, practical activities, case studies, assessment, and individual study.

Learning Outcomes

By the end of this program, participants will have acquired essential knowledge and practical skills in sustainable aquaculture practices, technological innovation, industry collaboration, professional communication, and project management.

Module 1: Sustainable aquaculture production

Credit Value: 1 ECVET / ECTS credit

- Explain fundamental concepts and practices in sustainable aquaculture production.
- Identify and implement environmentally responsible and plastic-free aquaculture techniques.
- Apply innovative methods for the development and preservation of aquatic products.
- Demonstrate knowledge of economic strategies, effective marketing, management, and communication in aquaculture businesses.
- Evaluate and utilize advanced environmental sustainability techniques, such as bioremediation.
- Understand and adopt technological innovations, including IoT, sensor technologies, and AI, in aquaculture practices.

Module 2: Certification, Collaboration, and Professional Growth

Credit Value: 1 ECVET / ECTS credit

- Recognize, select, and apply relevant quality certification frameworks and standards within the aquaculture industry.
- Establish and maintain effective partnerships and collaborations between aquaculture producers and distributors.
- Demonstrate improved interpersonal communication skills, active listening, empathy, and emotional intelligence within professional contexts.
- Effectively recognize, manage, and mitigate professional stress, enhancing personal resilience and productivity.

- Identify funding opportunities and successfully develop and manage project proposals in sustainable aquaculture.

Teaching and Learning Methods
- **Guided Learning: [40%]**
  Structured lessons, interactive lectures, expert panel discussions (round tables), case study analyses, group discussions, and direct interaction with experts to facilitate theoretical understanding and practical knowledge.

- **Work-Based Learning: [30%]**
  Practical tasks, real-world case studies, examples from industry practices, simulations, and scenario-based activities designed to connect theoretical knowledge with practical applications in sustainable aquaculture.

- **Independent Activities: [30%]**
  Individual assignments, self-directed study, literature review, project proposal preparation, and reflection tasks encourage critical thinking, deeper learning, and independent problem-solving.

Course Content

Module 1: Sustainable aquaculture production
- Fundamentals and practices of sustainable aquaculture production
- Plastic-free and environmentally responsible aquaculture practices
- Innovative product development and preservation methods
- Business economics, marketing, management, and communication strategies
- Advanced techniques for environmental sustainability
- Technological innovations in aquaculture

Module 2: Certification, Collaboration, and Professional Growth
- Certification frameworks and quality standards
- Collaboration and effective partnerships in sustainable aquaculture
- Professional development, communication, and interpersonal skills
- Emotional intelligence and stress management in business contexts
- Funding opportunities and successful project management

Learning materials
Primary Literature
(All primary sources will be accessible through the LMS)

- Project-developed materials – Presentations and handouts covering key concepts in sustainable aquaculture, environmental responsibility, and innovative technologies.
- Selected textbooks and industry reports – Relevant chapters on aquaculture production, environmental management, and sustainability frameworks.
- Peer-reviewed journal articles – Research papers on bioremediation techniques, sustainable certification processes, and technological advancements in aquaculture.

Supplementary Readings and Resources

(Additional materials are available on the LMS in the form of guides, links, and recommended readings.)

- Scientific articles and case studies – Covering sustainable aquaculture practices, digital transformation in the industry, and economic impact analyses.
- Regulatory and certification guidelines – Documentation on sustainability standards such as CSQA, MSC, and Friend of the Sea.
- Industry reports and best practices – Insights into successful aquaculture enterprises and sustainability-driven business models.

Assessment Methods

Topic-Based Quizzes (60%)

- Short assessments at the end of each key topic to evaluate the understanding of sustainable aquaculture principles, environmental responsibility, certification frameworks, and technological innovations. These quizzes reinforce key concepts and maintain continuous engagement with the material.

Case Study Analysis (40%)

- Participants will analyze a real-world example of an aquaculture operation, applying sustainability strategies, business insights, and technological solutions. The assessment focuses on problem-solving, critical thinking, and decision-making in real-world scenarios.

Grade

Instruction: Indicate if the assessment will result in a grade. Choose from below:

- ***Yes**, the assessment will result in a grade using an evaluation system compliant with European education standards:*
  - *A (90-100%): Exemplary demonstration of entrepreneurial skills with innovative application to blue economy case studies*
  - *B (75-89%): Proficient execution of strategic frameworks with minor operational gaps*
  - *C (60-74%): Basic competency in core methodologies requiring supervision*
  - *D (50-59%): Partial achievement requiring reassessment of specific modules*

- o *F (<50%): Insufficient demonstration of learning outcomes*

Resources Required
- Stable internet connection.
- PDF Reader (e.g., Adobe Acrobat Reader, Foxit) – for accessing course materials.
- Web Browser (e.g., Chrome, Firefox)—ensure full compatibility with the LMS for seamless navigation.

Certification
Upon successful completion of the program, participants will receive an official certificate issued by the project consortium.
The certificate will include:
- Participant's name and details
- Course title and description of learning outcomes
- ECVET / ECTS credit allocation (2 ECVET / ECTS credits)
- Details on assessment methods and achieved competencies

Evaluation Methods
The effectiveness of the program will be assessed through participant feedback and post-course surveys, ensuring continuous improvement and compliance with European quality benchmarks. At the end of the course, participants will complete surveys or questionnaires to provide insights into the course content, teaching methods, and overall learning experience.

Quality assurance
Participant feedback will assess the program's effectiveness. At the end of the course, participants will complete a survey to provide insights into the content, teaching methods, and overall experience. Instructors will also engage in peer review sessions to reflect on teaching effectiveness and identify areas for improvement. This approach ensures continuous enhancement of the program based on honest feedback.

Contact information
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References

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