



# FLORES

Offshore Renewable Energies  
partnership in the Pact for Skills

## **Reskilling toolkit for the Baltic pilot area.** Beyond Offshore Wind: Ocean Multi-use MOOC (Massive Open Online Course)

March 2025



Co-funded by  
the European Union

## About this Report

**Forward Looking at the Offshore Renewables** is promoting the core activity of the Large-scale partnership launching the Pact for Skills in the Offshore Renewable Energies (ORE) sector. FLORES supports the most committed stakeholders in ORE, underpinning the success of the offshore renewable energy strategy with the stimulation of dedicated training offers. The partnership promotes the skilling process for the new jobs expected in the sector, estimated to account for 124,000 new workers in the EU by 2030 and contributes to improve upskilling opportunities in the field of the actual ORE workforce.

Project duration: January 2023 – March 2025 (27 months)

[www.oreskills.eu](http://www.oreskills.eu)

Document information	
<b>Short description</b>	Syllabus and supporting training materials with teacher's guides to adapt to different target users.
<b>Next steps</b>	Use of the materials and adaptation to different target users and different formats.
<b>Work Package</b>	WP5 – Building durable partnerships
<b>Task</b>	T 5.2. – Adaptation of the training offer and supporting materials
<b>Deliverable</b>	D5.2.- Reskilling toolkit for the pilot areas
<b>Dissemination level</b>	Public
<b>FLORES website link</b>	<a href="http://www.oreskills.eu">www.oreskills.eu</a>
<b>Lead authors</b>	López-Morado, M. (UDC), Santiago Caamaño, L. (UDC), Díaz Casás, V. (UDC)
<b>Contributors</b>	Kovacevic, M. (SUBNET), Lukic, I. (SUBNET), Drews-von Ruckteschell, F. (SUBNET), Fraga L. (CETMAR)
<b>Photo credits</b>	<a href="#">H2020UNITED</a> Project, <a href="#">ULTFARMS</a> Project, <a href="#">MUSES</a> Project, <a href="#">Amazon</a>
<b>Submission date</b>	March 2025

### Please cite this publication as:

López-Morado, M. , Santiago Caamaño, L. , Díaz Casás, V. , (2025). Reskilling toolkit for Baltic Pilot Area. Beyond Offshore Wind: Ocean Multi-use MOOC (Massive Open Online Course). Results of the FLORES project ([www.oreskills.eu](http://www.oreskills.eu)).

or

UDC, (2025). Reskilling toolkit for Baltic Pilot Area. Beyond Offshore Wind: Ocean Multi-use MOOC (Massive Open Online Course). Results of the FLORES project ([www.oreskills.eu](http://www.oreskills.eu)).

### Copyright

This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License. You are free to: Share (copy and redistribute the material in any medium or format); adapt (remix, transform, and build upon the material). Under the following terms: Attribution (You must give appropriate credit, provide a link to the license, and indicate if changes were made); NonCommercial (You may not use the material for commercial purposes).



Co-funded by  
the European Union

# Content

<b>Introduction.....</b>	<b>4</b>
<b>Pilot action description.....</b>	<b>5</b>
<b>Syllabus.....</b>	<b>6</b>
Introduction .....	6
Title and description .....	7
Teaching team .....	7
Target users.....	7
Classifications of Target User Occupations According to ESCO.....	8
Prior knowledge.....	8
Estimated dedication .....	9
Learning objectives.....	9
Table of contents / Course Schedule.....	9
Evaluation criteria and course completion conditions .....	11
Completion Conditions:.....	11
Evaluation Criteria:.....	12
Certification.....	12
Dynamization.....	12
Contact information .....	13
<b>Teacher’s toolkit .....</b>	<b>14</b>
Introduction .....	14
Title and description .....	14
Prior knowledge.....	14
Learning objectives.....	14
Training materials .....	15
Course duration.....	15
Necessary resources .....	16
Activities and dynamization .....	16
Methodology and groups.....	16
Evaluation.....	17
Evaluation Methodology.....	17
Assessment Criteria .....	17
Instructor Role:.....	18
Complementary activities.....	18
<b>Impact and results .....</b>	<b>19</b>

## Introduction

FLORES project includes four pilot actions aimed at addressing the changes in the ORE labour market and its rapid expansion. In particular, the challenge of developing reskilling processes to promote the mobility of workers from other energy sectors or the shipbuilding industry and upskilling the workforce to the specific ORE training needs in the multi-use of maritime space and marine spatial planning.

The training presented in this document, titled “***Beyond Offshore Wind: Ocean Multi-Use MOOC***” is part of a set of pilot actions, that would create a training itinerary addressing the specific training needs in four areas of the Atlantic, the Baltic and the Mediterranean. This pilot action was developed in the Baltic Sea Region.

The purpose of this report is to **facilitate the adaptation of the pilot action to different future target users**, including other contexts, approaches and needs. Moreover, to assist its replicability.

This document contains four main sections:

- **Pilot action description:** provides the information related to the pilot.
- **Syllabus:** addressed to meet the students' expectations.
- **Teacher's toolkit:** designed to provide the trainers with enough information in order to adapt the materials to their target context.
- **Impact and results:** this section analyses the pilot experience.

Furthermore, it should be emphasized that the syllabus and teacher's toolkit sections not only contain the information on the concrete pilot, but they also provide instructions on how to create them from scratch.

This document has been made accessible by publishing it in an open and electronic format and translating it into English, Spanish, French, and Italian.

## Pilot action description

The pilot action undertaken as part of the FLORES project in the **Baltic Sea region** was designed to enhance educational and career opportunities in the Offshore Renewable Energies sector, emphasizing upskilling processes and promotion of women involved in maritime technologies. Additionally, this pilot action introduced the concept of **ocean multi-use to the Baltic Sea audience by developing the region's first-ever course on this topic**.

Here is a **brief description** of the activities undertaken during the FLORES project's length:

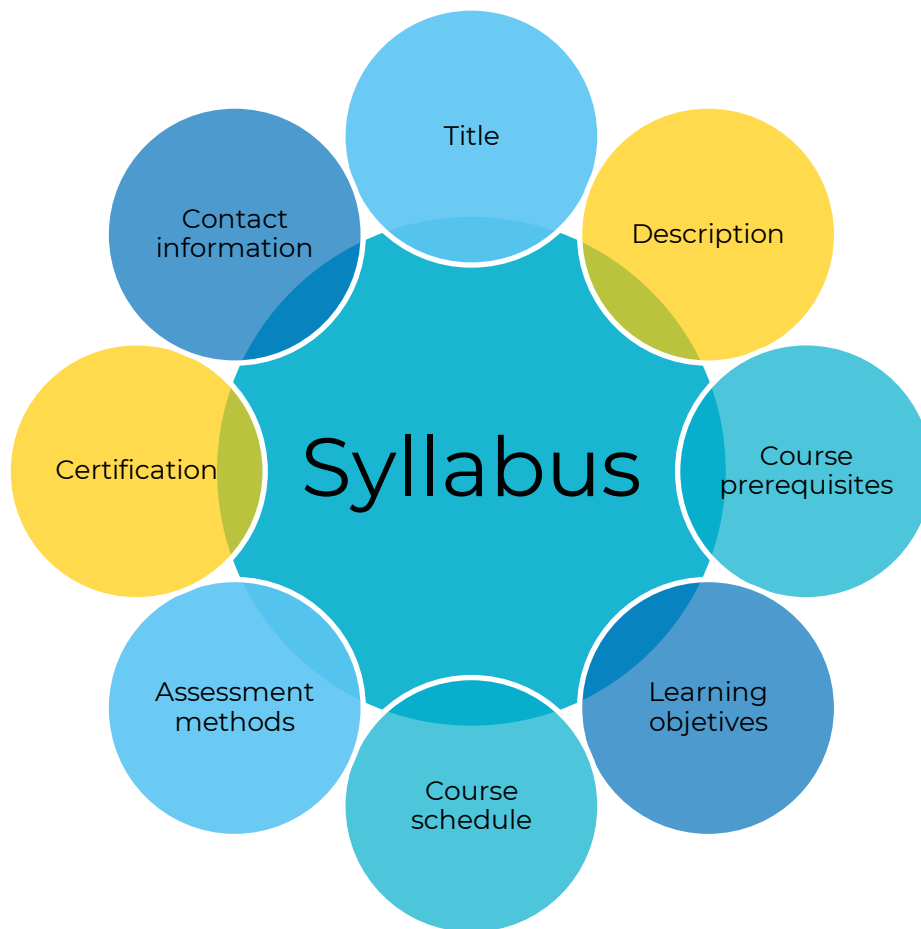
1. Development and Implementation of the MOOC (Massive Open Online Course) on the topic of ocean multi-use: The course titled "Beyond Offshore Wind: Ocean Multi-Use" was developed to introduce and provide comprehensive training on the multi-disciplinary approach required for successful implementation of the concept of multi-use of ocean space. Hosted on the SUBMARINER website, this MOOC was launched in July 2024 and will remain active after the FLORES project is completed. It was designed to engage participants in understanding the integration of offshore wind farms with other marine activities, such as mussel farming, aquaculture, tourism and floating offshore solar energy. More about the course can be found here: <https://oreskills.eu/ocean-multi-use-course-and-ore-promotion-baltic/>.
2. Workshop and Event with High School Students from Sweden: This activity involved direct engagement with high school students from the Gothenburg region through a workshop focused on career opportunities in the ORE sector. The workshop aimed to inspire and educate young individuals about sustainable energy solutions and the potential for future employment in this innovative field. More here: <https://oreskills.eu/flores-at-the-1st-mission-arena/>
3. Participation and Presentation at Events: The project was prominently featured in two major events: the Mission Arena 1 event in Gothenburg and the Mission Arena 2 in Riga, Latvia. These events provided space for discussion on gender gaps and new job opportunities within the ORE sector, reaching a broader audience of stakeholders from across the Baltic and North Sea regions. More about them here:
  - <https://oreskills.eu/flores-at-the-1st-mission-arena/>
  - <https://oreskills.eu/flores-at-the-2nd-mission-arena/>

## Syllabus

### Introduction

A syllabus provides a **comprehensive guide for teachers and learners** with **essential information establishing a well-structured framework enabling an understanding of what to expect from the course and allowing both students and teachers to manage their responsibilities effectively.**

It usually includes the course title and description, the learning objectives, the course schedule, the assessment methods, the type of certification available, the course prerequisites, the contact information and other essential components that ensure effective teaching and learning. The required information to be included in the syllabus design depends on the type of training that is offered, and it should be adapted to each specific case.



A syllabus may be either a document or be designed in a multimedia format that presents the content, structures and expectations of the educational training. Independently to the format, it should be understandable and accessible not only for inclusion but also to ensure the student's engagement in the course. The syllabus gives students a first impression of what to expect from the course, and it can significantly influence their choice to enroll in the training or not.

For more detailed information about the development process of different training formats, download the document [“Guidelines to Promote Innovative Approaches in Life-Long Learning \(LLL\) for Offshore Renewable Energies \(ORE\), UDC, 2023”](#) developed within the framework of this same FLORES project.



Below, a syllabus format that has been completed considering the objectives of the pilot action is shown. To facilitate its development, various definitions and examples are provided. The following sections provide recommendations, which may be adapted to the specific needs of each training program.

If necessary, adding any extra sections is possible to facilitate the understanding of the training for future students.

## Title and description

This section includes the title of the training and a brief description of the content.

The course **“Beyond Offshore Wind: Ocean Multi-Use MOOC”** has been developed with the aim of addressing the lack of easy-to-read sources on the topic of offshore renewables-related multi-use. Implementing multi-use as a highly multidisciplinary tool requires a variety of knowledge and expertise that extends beyond any single sector. In collaboration with several multi-use-related projects, including [UNITED](#), [MUSES](#), [ULTFRAMS](#), and [MULTI-FRAME](#), among others, this course has been developed. It builds upon the materials produced in these projects, providing an easy-to-read entry into the relevant topics and materials.

This course has been developed for the purpose of the FLORES project, under the Baltic Sea Pilot Action initiative.

## Teaching team

Marko, Kovacevic, SUBMARINER Network For Blue Growth EEIG
--

Ivana, Lukic Surname(s) SUBMARINER Network For Blue Growth EEIG
--

Franziska, Drews-von Ruckteschell, SUBMARINER Network For Blue Growth EEIG
---

## Target users

This section specifies who the course is intended for. It helps the students to identify if the training is suitable for them.

This course is designed to appeal to a broad audience interested in offshore renewables related multi-use, with a focus on accessibility and simplicity. While it is open to individuals with varying levels of expertise, it particularly caters to the following groups:

1. **High School Students of Senior Years:** Specifically, those in their final two years (aged 16-18) with a specialisation in technology. The course is structured to be accessible to this demographic, providing foundational knowledge without requiring extensive prior experience in the field.
2. **University Students:** Primarily targeting first-year students enrolled in programs with a focus on Maritime Spatial Planning (MSP) and Offshore Renewable Energy Engineering (ORE). The course serves as a valuable introduction to multi-use concepts within the context of offshore renewables, complementing their academic curriculum.

3. **Junior Engineers:** Individuals who are beginning their careers in engineering, especially those interested in or transitioning to roles related to offshore renewables. The course offers a comprehensive overview of multi-use principles and practices, laying the groundwork for further specialization in the field.
4. **Workers Upskilling/Reskilling:** Professionals from diverse sectors seeking to enhance their knowledge and skills in the rapidly evolving field of offshore renewables. Whether transitioning from related industries or aiming to broaden their expertise, the course provides a solid foundation in multi-use concepts.

#### Classifications of Target User Occupations According to ESCO

1. High School Students of Senior Years – ESCO code doesn't exist.
2. University Students:
  - a. ESCO Code: 2141.1 – Environmental engineer.
  - b. ESCO Code: 2149.9.5 Offshore Renewable Energy Engineer.
  - c. ESCO Code: 2149.1 – Urban and regional planner.
3. Junior Engineers:
  - a. ESCO Code: 2141.1.2 – Energy engineer.
4. Workers Upskilling/Reskilling:
  - a. ESCO Code: 3113.1 – Electrical engineering technician.
  - b. ESCO Code: 7543.1 – Renewable energy technician.

#### Prior knowledge

*This section explains the required skills or prerequisites the students should ideally have before beginning the training. It is important to specify if it is recommended but not required, or if it is required. Examples:*

- *Basic understanding [of relevant concepts in a specific topic]*
- *Experience in [relevant or related field]*
- *Proficiency in [basic skills, including ...]*
- *Familiarity with [specific software or tools]*

*It could be also included in this section the technical requirements for participating in the online course, such as an internet connection or the specific necessary hardware or software. Example:*

- *access to internet connection, compatible web browser*

While no specific prerequisites are required, it is recommended that participants have a basic understanding of technology and an interest in offshore renewable energy. The course is designed to accommodate learners with diverse backgrounds by providing clear explanations and accessible resources to facilitate comprehension.

Technical requirements for participation include:

- A device with access to a stable internet connection (including mobile phones).
- A compatible web browser (Google Chrome, Safari, Mozilla Firefox, etc.).
- Basic proficiency in English to follow the course content.

Additionally, the course can be accessed on any device with an internet connection, including mobile phones.



## Estimated dedication

*In this section, it is specified not only the total expected dedication but also the estimated dedication per week. This is helpful for the students to know how much time they will need weekly to complete the course.*

*It is useful also to specify other details as: the expected time for self-study, the opening period of the modules or whether the schedule is fixed or not.*

The duration of this course is 15 hours, including the bonus chapter with interviews. The estimated dedication per week is structured as follows:

- Module 1 and Module 2: 1 week (5 hours)
- Module 3 and Module 4: 1 week (4 hours)
- Module 5 and Module 6: 1 week (4 hours)
- Module 7 and Closing: 1 week (2 hours)

This schedule is designed for self-paced study, allowing students to progress through the material at their own convenience. Each module will be accessible from the beginning of the course, enabling learners to manage their time effectively based on personal schedules.

## Learning objectives

*This section includes the training goals, aimed at the students. The learning objectives are usually written using verbs to explain to the learners what to do (what to learn). It is necessary to define the objectives in a short and specific way and the action might be measurable. These objectives will serve not only the students but also the teachers, to check at the end of the training if they address them.*

- Get a thorough understanding of the principles, benefits, and applications of ocean multi-use, and explore the possibilities for integrating offshore wind farms with other marine activities by examining leading multi-use initiatives.
- Develop essential skills for interdisciplinary collaboration and effective engagement between interested parties and apply methodologies that could improve the sustainability and efficiency of multi-use offshore renewable energy projects.
- Address practical challenges in the field of ocean multi-use, get an idea how some challenges were overcome, and hear what people that work in the ORE sector and on multi-use projects have to say about being part of it.

## Table of contents / Course Schedule

*In this section, a table of contents of the modules is usually included. They could be organized in thematic blocks or with any other justified criteria.*

*The idea is to index the content and to organise the different programmed activities of the course, including:*

- *The supplementary material.*
- *The evaluation /assessment /test /questionnaire.*
- *The Forum.*

*If the specific dates of the course are known, it would be useful for the students to include the course schedule.*

Module 1		Title: Introduction to ocean multi-use
1	Presentation of the module.	
	1.1.	Introduction to ocean multi-use
	1.2.	What is ocean multi-use?
	1.3.	Why ocean multi-use?
Module 2		Multi-Use Combination Example: Offshore Wind + Oyster Aquaculture + Nature Restoration in Belgium
2	Presentation of the module.	
	2.0.	Coming up in chapters 2, 3 and 4!
	2.1.	Introduction: Multi-use in Belgium
	2.2.	Offshore wind + oyster aquaculture + nature restoration + seaweed aquaculture   MU combination
Module 3		Multi-Use Combination Example: Offshore Wind + Floating Solar + Seaweed Farming in the Netherlands
3	Presentation of the module.	
	3.1.	Introduction: Multi-use in the Netherlands
	3.2.	Offshore wind + floating solar + seaweed farming   MU combination
	3.2.1	Offshore wind farm + Seaweed farming
	3.2.2	Offshore wind farm + Offshore floating solar farm
	3.3.	Multi-use plans in the Netherlands – First commercial-scale seaweed farm located between offshore wind turbines
Module 4		Title: Multi-Use Combination Example: Offshore wind + Tourism at offshore park in Denmark
4	Presentation of the module.	
	4.1.	Introduction: Multi-use in Denmark
	4.2.	Offshore wind + tourism at offshore park in Denmark
	4.3.	Tour of the Offshore Wind Farm
Module 5		Title: Space Efficient Offshore Energy Solutions - Energy Islands, Multi-Use, And Others
5	Presentation of the module.	
	5.1.	Introduction to space efficient offshore energy solutions
	5.2.	Energy island concept
	5.3.	Multi-source energy offshore parks

	5.4.	Seaweed and blue mussels farming within wind farms
Module 6		Title: Challenges and Constraints regarding Ocean Multi-Use
6	Presentation of the module.	
	6.1.	Introduction to challenges and constraints regarding ocean multi-use
	6.2.	Socio-Economic challenges
	6.3.	Legal and governance challenges
	6.4	Technical and technological challenges
	6.5	Course conclusion and the next steps!
	6.6	Quiz: What have you learned so far?
Module 7		Title: BONUS CHAPTER: Interviews with industry professionals
7	Presentation of the module.	
		A set of more than 15 interviews with people working in the industry.

## Evaluation criteria and course completion conditions

*In this section, the completion conditions and the evaluation criteria to assess the students are indicated. This information is usually adapted for each specific course and must be well-defined in order to promote transparency and meet the students' expectations. Different examples are shown below:*

- *Completion conditions:*
  - *Minimum requirements, specifying the compulsory activities.*
  - *Attendance policy and/or a minimum of hours connected.*
- *Evaluation criteria:*
  - *Definition and description of the assessment methods: exams, assignments, projects, presentations, quizzes, participation in the Forums, etc. Specifying the criteria or rubric that will be used to evaluate them.*
  - *The evaluation /assessment /test /questionnaire.*
  - *The Forum.*

*It is essential to take into consideration that if the platform allows to check that the student is performing the required action, such as watching videos.*

To successfully complete the course, you must fulfil the following conditions:

### Completion Conditions:

All lessons, including those in the bonus chapter, must be completed sequentially by clicking on “Complete and Continue” or “Next Lesson” after each section.

### Evaluation Criteria:

- You will be assessed through a final quiz, which they must complete after finishing all lessons. The quiz consists of five questions, and you must achieve a minimum score of 3 out of 5 to pass. Two retake options are available if the required score is not met on the first attempt.
- Upon achieving the required score on the quiz, you will be able to download a personalized certificate of completion from their student account.

### Certification

*This section explains the type of certification that would be provided if the students address the completion conditions. The certification indicates at least the title of the course, the estimated dedication (in total hours) and the identification of the student. It is also interesting to include, if possible, in the backside, an index with the contents.*

After completing all lessons, including those in the bonus chapter (by clicking on “Complete and Continue” or “Next Lesson” each time), and achieving a score of at least 3 out of 5 on the quiz (with 2 retake options), you will be able to download a certificate in your name, which will appear in your student account. This course, the first course on the topic of ocean multi-use, is developed by SUBMARINER Network and supported by the University of A Coruña. This course is part of the Baltic Sea Pilot actions of the FLORES project.

### Dynamization

*This section explains to the students the relevance of sharing and conveying doubts both to the teachers and to the rest of the participants. This approach facilitates and enhances collaborative learning.*

*It includes a description of the participation tools and the rules of use of these tools. It could be a general forum where to introduce themselves, or/and forums by module to comment, suggest and ask any aspect about each of the thematic blocks.*

*If the platform where the course is hosted has any tool for implementing dynamization forums or similar, external platforms could be used. For example:*

- Social media groups
- Collaborative online tools
- Interactive online whiteboards

In this course, you will experience a dynamic and collaborative learning environment where sharing and discussing doubts between the fellow participants, is highly encouraged. This approach is designed to enhance your learning experience by fostering a collaborative learning.

To facilitate this, we have established a [closed forum group](#) exclusively available for course participants and alumni, through their student’s account. This forum serves as a central hub where you can introduce yourself, share your thoughts, ask questions, and provide feedback. It’s a welcoming environment where everyone is encouraged to engage and interact. Remember to communicate genuinely and respectfully. This forum is maintained by the course creator and the SUBMARINER Network.

Another form of interaction is through the FLORES project on social media:

- [Instagram](#)
- [LinkedIn](#)
- [X \(former Twitter\)](#)
- [YouTube](#)

## Contact information

*This section includes contact information for learning issues and technical or administrative support.*

If you have any questions or concerns, please contact:

Marko Kovacevic, Course Creator:  
[mko@submariner-network.eu](mailto:mko@submariner-network.eu), +49 16019401806

## Teacher’s toolkit

### Introduction

The teacher’s toolkit is a **resource that supports educators in planning and managing their teaching practices**. It provides tools, materials and strategies to enhance the teaching and learning experience. Furthermore, due to the characteristics of the pilot action, this resource should provide ideas for the adaptation of the material to the target.

*Below, instructions for the development of a teacher’s toolkit are presented, as well as the template completed considering the objectives of the pilot action. To facilitate its development, various definitions are provided. The following sections provide recommendations; however, they can be adapted to the needs of each training program. If needed, it is possible to add any extra sections.*

### Title and description

*This section is the same as in the syllabus design.*

The course “[Beyond Offshore Wind: Ocean Multi-Use MOOC](#)” has been developed with the aim of addressing the lack of easy-to-read sources on the topic of offshore renewables-related multi-use. Implementing multi-use as a highly multidisciplinary tool requires a variety of knowledge and expertise that extends beyond any single sector. In collaboration with several multi-use-related projects, including [UNITED](#), [MUSES](#), [ULTFRAMS](#), and [MULTI-FRAME](#), among others, this course has been developed. It builds upon the materials produced in these projects, providing an easy-to-read entry into the relevant topics and materials.

This course has been developed for the purpose of the FLORES project, under the Baltic Sea Pilot Action initiative.

### Prior knowledge

*This section is the same as in the syllabus design.*

While no specific prerequisites are required, it is recommended that participants have a basic understanding of technology and an interest in offshore renewable energy. The course is designed to accommodate learners with diverse backgrounds by providing clear explanations and accessible resources to facilitate comprehension.

Technical requirements for participation include:

- A device that has access to a stable internet connection (including mobile phones).
- A compatible web browser (Google Chrome, Safari, Mozilla Firefox, etc.).
- Basic proficiency in English to follow the course content.

### Learning objectives

*This section is the same as in the syllabus design. Nevertheless, it is expected a higher level of detail here, explaining not only the general objectives but also specific and transversal learning objectives.*



1. Comprehensive Understanding of Ocean Multi-Use Principles:

Students will gain a thorough understanding of the principles, benefits, and real-life applications of ocean multi-use. This includes knowledge on integrating offshore wind farms with other marine activities in a synergistic manner, leveraging insights from leading multi-use projects like UNITED, MUSES, ULTFRAMS, and MULTI-FRAME.

2. Development of Interdisciplinary Skills for Sustainable Project Management:

Students will develop essential skills for interdisciplinary collaboration and sustainable project management. They will learn how to engage with stakeholders effectively and apply methodologies that promote the sustainability and efficiency of multi-use offshore renewable energy projects.

3. Practical Problem-Solving Abilities in Offshore Renewables:

Students will be equipped to address practical challenges in the field of offshore renewables. They will acquire the ability to contribute valuable solutions to the advancement and sustainability of ocean multi-use projects, ensuring space-efficient offshore energy solutions.

## Training materials

*The total training materials or a part of them are typically included in this section in a link format. Additionally, a link to the training is provided as a list of references or bibliography for the students.*

The "Beyond Offshore Wind: Ocean Multi-Use" massive online open course (MOOC) is hosted online and is free to register for, using this link: <https://submariner-network.eu/ore-skills-multi-use-course/>.

Once a teacher/student has enrolled, they will have access to the [Resources page](#), which offers links to all the references and materials used in the course, as well as extra materials for learning more about the current state of the multi-use field.

Registered participants get access to a [closed forum group](#) where students, teachers and course creators may discuss ideas, ask questions, and provide comments (see the Activities and Dynamization section below).

## Course duration

*In this section, the expected duration of the course is specified. For an online self-study course, the estimated time commitment required from the student is indicated. For a guided course, the number of sessions and the duration of each session are detailed.*

The duration of this course is 15 hours, including the bonus chapter with interviews. The estimated dedication per week is structured as follows:

- Module 1 and Module 2: 1 week (5 hours)
- Module 3 and Module 4: 1 week (4 hours)
- Module 5 and Module 6: 1 week (4 hours)
- Module 7 and Closing: 1 week (2 hours)

This schedule is designed for self-paced study, allowing students to progress through the material at their own convenience. Each module will be accessible from the

beginning of the course, enabling learners to manage their time effectively based on personal schedules.

This course was created primarily for self-paced study but can also include a guided course program. The course was not tested in a guided course setting, and the estimation is that the time is not expected to vary greatly and is determined by the pace of the guide (teacher). The MOOC style of the course, and the amount of the video materials contained, allows the course to be used in different learning scenarios.

### Necessary resources

*This section includes the necessary tools for the training development, such as an internet connection and any specific software or online platforms, if applicable.*

Technical requirements for participation include:

- A device with access to a stable internet connection (including mobile phones).
- A compatible web browser (Google Chrome, Safari, Mozilla Firefox, etc.).
- Basic proficiency in English to follow the course content.

### Activities and dynamization

*In this section, the activities to be carried out during the course are specified, including any proposed dynamization or engagement activities, if applicable. This section is similar to the one in the syllabus called “Dynamization”, however, in the teacher’s toolkit, the description of the dynamization activities is usually more detailed, explaining how they are developed.*

In this course, you will facilitate a dynamic and collaborative learning environment, encouraging students to share and discuss their doubts with fellow participants. This approach is designed to enhance their learning experience through collaboration.

### Course’s engagement activities:

- **Closed Forum Group:** [A forum](#) accessible through student accounts, serving as a central hub for introductions, discussions, questions, and feedback. This forum should be actively maintained by the course creator and SUBMARINER Network employees to ensure it remains a welcoming and respectful environment.
- **Social Media Interaction:** Encourage students to engage with the FLORES project on various social media platforms:
  - [Instagram](#)
  - [LinkedIn](#)
  - [X \(former Twitter\)](#)
  - [YouTube](#)
- **In-Person Discussion Groups:** If the course is conducted in a live scenario as a guided course, we support teachers in creating their own in-person multi-use discussion groups. These groups can further facilitate collaboration and deepen the learning experience.

### Methodology and groups

*It is essential to define the teaching and learning methodology. If the training is designed to be adapted for onsite training, then it usually includes the definition of the*

*specific methodology, explaining the need for instructors based on the number of students, and also the roles of the trainers and the students in each group if necessary.*

This course is designed as a self-study MOOC, providing flexibility for participants to learn at their own pace.

Methodology:

- Self-Study: Participants can access course materials and complete lessons at their convenience.
- Online Resources: Comprehensive materials are available online, including video lectures, readings, and quizzes.
- Interactive Components: A closed forum group is available for discussions, questions, and feedback. This forum is maintained by the course creator and SUBMARINER Network employees to ensure a respectful and supportive environment.

Groups and Communication:

- Online Forum: Facilitates introductions, discussions, and collaborative learning among participants.
- In-Person Groups: This course is primarily designed as a self-study online course. If the teacher decides to adapt the course to onsite training, they can create in-person discussion groups to further enhance collaboration and learning. The roles of trainers and students in these groups should be clearly defined to ensure effective engagement.

### Evaluation

*This section presents a description of the evaluation process. This includes an explanation of the evaluation methodology, the assessment criteria and the instructor's role. It is usually shown how the teacher assesses the students, such as through a designed rubric. Details are also given if the evaluation involves self-assessment by the students or peer assessment.*

This course employs an evaluation process to ensure that participants have effectively grasped the key concepts. The evaluation methodology and criteria are outlined below:

#### Evaluation Methodology

- Course Completion: To successfully complete the course, participants must finish all lessons, including those in the bonus chapter, by clicking on “Complete and Continue” or “Next Lesson” after each section.
- Final Quiz: Upon completing the lessons, participants will take the final quiz. The quiz consists of five questions, and a minimum score of 3 out of 5 is required to pass. Participants have two retake options if the required score is not achieved on the first attempt.
- Certification: After passing the quiz, participants will be able to download a personalized certificate of completion from their student account.

#### Assessment Criteria

- Quiz: The final quiz assesses participants' understanding of the course material. The questions are designed to evaluate the comprehension and application of the principles discussed in the course.

- Completion Tracking: Progress through the course is tracked by the system, ensuring that participants have engaged with all required materials before attempting the final quiz.

### Instructor Role:

- Support and Guidance: While the course is primarily self-study, course facilitators from the SUBMARINER are available to provide support and answer questions in the online forum.
- Forum Participation: Teachers are encouraged to actively participate in the forum discussions to facilitate learning and engagement among students.

### Complementary activities

*Optionally, alternative activities which could be interesting for the training can be included.*

Once enrolled, teachers and students will have access to the [Resources page](#). This page offers links to all the references and materials used in the course, as well as additional resources for further learning about the current state of the multi-use field.

## Impact and results

This section presents an analysis of the results and the impact of the pilot action that was realized during the FLORES project. It has been evaluated not only the participant quantity but also the quality of learning, accessibility and diversity, including gender representation.

Furthermore, it has been assessed how the course has contributed to improving practices within the ORE sector and any direct impacts on other organizations, institutions or partners as well as on the students that receive the training.

*This analysis can be developed in different ways, tailored to each specific training. It is important to present the information in an informative format. Below are some key points that can be considered in the analysis to help measure the impact and results:*

- *Implementation dates*
  - *Start and end dates of the training.*
- *Participants information*
  - *Total number of registrants and active participants*
  - *Course completion rate*
- *Accessibility and diversity of the sample*
  - *Gender distribution among participants*
  - *Geographic diversity of participants (countries of origin)*
  - *Representation of different age groups and professional sectors*
  - *Inclusion of minorities or underrepresented groups*
  - *Language of the course*
- *Feedback*
  - *Participant satisfaction surveys*
  - *Qualitative feedback on the usefulness and relevance of the content*

Beyond offshore wind: Ocean multi-use free massive open online course (MOOC) has been developed with the aim of addressing the lack of easy-to-read sources on the topic of offshore renewables-related multi-use. Implementing multi-use as a highly multidisciplinary tool requires a variety of knowledge and expertise that extends beyond any single sector. Upon completing this course, students gained a thorough understanding of the principles, benefits, and real-life applications of ocean multi-use, with a particular focus on integrating offshore wind farms with other marine activities in a synergetic way. More about the course and course registration here:

<https://submariner-network.eu/ore-skills-multi-use-course/>.

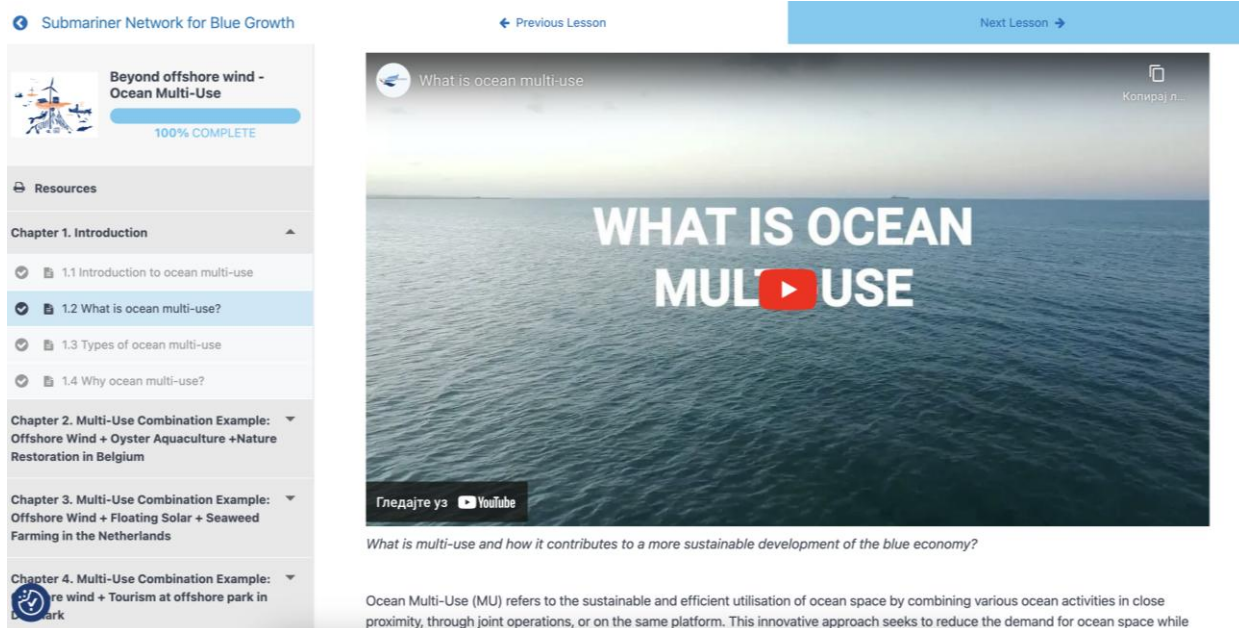


Image: Screenshot/[Beyond Offshore Wind: Ocean Multi-Use course](#)

Developed in the first half of 2024 and launched in July of 2024, the course had attracted **165 participants** from **47 countries** by the end of the FLORES project in December 2024. Designed to be completed over approximately 15 hours and comprising seven modules—including an extra module featuring [16 video interviews](#) produced by WindEurope for the FLORES project—the course required completion of all modules for certification. By the report's deadline, 40 participants had earned certificates, marking a 24% completion rate, which is considered high for a free, universally accessible course. SUBMARINER will continue to maintain and offer the course post-project to ensure its ongoing availability. After completion of the course and watching 16 interview videos, participants received a certificate from the course creators (FLORES project, SUBMARINER Network with a support of University La Coruña). Some participants even shared:



Under the course, an [Alumni Discussion Group](#) was developed, where course participants had an opportunity to ask questions and engage with other participants, course creators and multi-use experts from SUBMARINER Network.

Course participants assessed their understanding of the material via a quiz: <https://forms.gle/xPAb2fEceUt6YHhh6>. The quiz, which did not affect certificate eligibility, had five questions worth one point each. After completing it, participants



could view their scores and correct answers. Fifteen participants took the quiz, and their results are as follows:

**Insights**

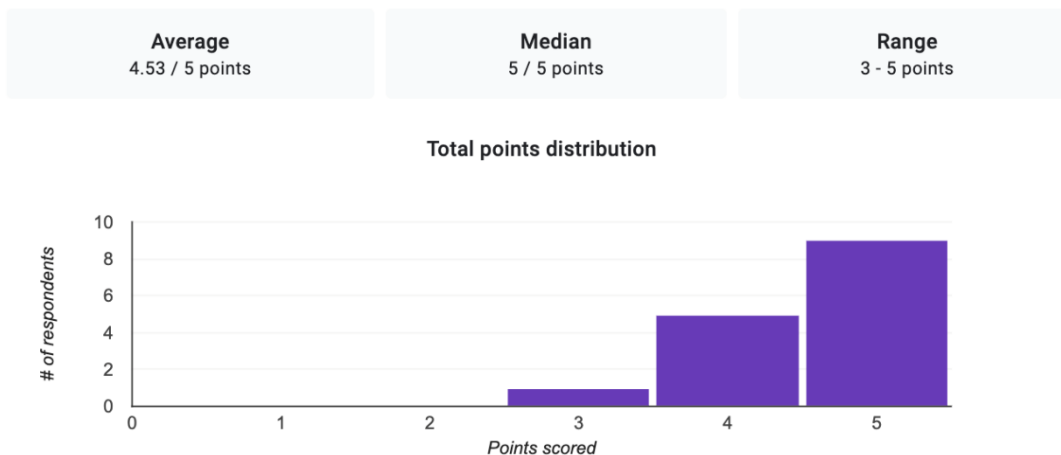


Image: Quiz results. Source: backend of the quiz made by Google forms: <https://forms.gle/xPAb2fEceUt6YHhh6>

Of the 15 participants, 9 scored 5/5, 5 scored 4/5, and 1 scored 1/5.

All participants were emailed a request to provide feedback on the course. Feedback gathered from participants through surveys and informal channels (such as LinkedIn and live discussions) highlighted the course's use across various professional backgrounds—from environmental engineers to recent graduates and PhD candidates in related fields. While some participants found the content introductory, others valued the practical insights, especially the expert interviews. Suggestions for improvement included the introduction of more technical content and offering a paid version of the course for advanced learning.

The pilot action's implementation timeline spanned from the initial events and workshops in November 2023 to the MOOC's launch in July 2024, concluding in December 2024. The initiative achieved a balanced gender representation among participants, reflecting its inclusivity goals. With attendees from 47 countries, the pilot demonstrated significant reach outside of the Baltic Sea region and engagement across various age groups and professional sectors.

The course was featured on the **European Commission's MSP platform**: <https://maritime-spatial-planning.ec.europa.eu/news/massive-open-online-course-ocean-multi-use> which showed the course got recognition and appreciation from the highest institutions of the EU and from the Maritime Spatial Planning sector.

The pilot action significantly advanced knowledge and practices in the ORE sector, promoting an integrated approach to offshore renewables and enhancing gender inclusivity. It improved participant skills and influenced organizational and institutional practices, securing a lasting impact on the sector.

The following infographic presents the summary of the course impact and results:

### Pilot Action Implementation Dates

**Initial Start Date:** November 2023 (First event and workshop with high school students)  
**Second Event and Workshop:** Dates following the initial event but before July 2024  
**MOOC Launch Date:** July 2024  
**End Date:** December 2024

### Participants information

165 MOOC participants

24% course completion rate

47 different countries

Engineers, PhD students, experienced professionals

### Direct Impacts on Organizations, Institutions or Partners

Discussions in the Alumni Discussion Group influenced community projects, such as integrating eco-engineering solutions in marina designs, directly affecting local planning and development.

Recognition on the **European Commission’s Maritime Spatial Planning platform** increased the course’s visibility and underscored its relevance.

### Notes and additional information

The FLORES project pilot action involved multiple components implemented at different times, significantly impacting the target audience and the broader Offshore Renewable Energies (ORE) sector. Here are the details of the impact and results:

Pilot Action Implementation Dates:

- Initial Start Date: November 2023 (First event and workshop with high school students)
- Second Event and Workshop: Dates following the initial event but before July 2024
- MOOC Launch Date: July 2024
- End Date: December 2024

Participants Information:

- Total Registrants: 165 participants in the MOOC
- Active Participants: Consistent engagement across all pilot activities
- Course Completion Rate: 24% (40 out of 165 participants received certificates)

Accessibility and Diversity of the Sample:

- Gender Distribution: Achieved a balanced representation, supporting the pilot’s gender inclusivity goals.
- Geographic Diversity: Participants from 47 countries, illustrating the global reach of the pilot.
- Representation of Different Age Groups and Professional Sectors: Included a wide range of professionals and students, highlighting the pilot’s broad appeal.
- Inclusion of Minorities or Underrepresented Groups: Continued efforts to include diverse groups were noted, with room for further enhancement.
- Language of the Course: English, facilitating

international participation, yet suggesting potential for multilingual expansion.

Feedback: Participant Satisfaction Surveys: Indicated high levels of satisfaction with the content’s relevance and practical application.

Qualitative Feedback from participants included diverse perspectives:

- Environmental engineers appreciated the foundational knowledge applicable to renewable energy projects.
- Recent graduates valued the real-world insights, particularly the expert interviews.
- A PhD student noted the course’s usefulness in complementing their specialized legal studies with practical sector knowledge.
- Experienced professionals suggested deeper technical content could enhance the course’s value further.

Direct Impacts on Organizations, Institutions, or Partners:

- Recognition on the European Commission’s Maritime Spatial Planning platform increased the course’s visibility and underscored its relevance.
- Discussions in the Alumni Discussion Group influenced community projects, such as integrating eco-engineering solutions in marina designs, directly affecting local planning and development.

Contribution to the ORE Sector and Practice Improvement:

- The pilot facilitated a deeper understanding of multi-use concepts, promoting sustainable marine activities integration.
- It supported efforts to close the gender gap in the ORE sector by highlighting women’s roles and challenges in maritime technologies.

