



MOOC
Massive Open Online Course on
Marine Litter

GENERAL COURSE INFORMATION

The Massive Open Online Course on Marine Litter has two tracks, i.e., a Leadership Track and an Expert Track.

Learning Objectives

After completion of the Leadership Track, you should be able to:

- Indicate the relevance of Marine Litter for society and understand marine litter problems;
- Apply the DPSIR (Driving Forces-Pressures-State-Impacts-Responses) framework to characterize Marine Litter issues and to illustrate how different strategies and technical solutions can be used to address these issues;
- Indicate how people with varying backgrounds can play a (leading) role in tackling Marine Litter;
- Propose a well-motivated strategy to address a specific or local Marine Litter issue taking into account the stake-holders involved, available knowledge and the governance, socio-economic, cultural and geographical context.

After the completion of the Expert Track you should be able to:

- Master the objectives of the Leadership Track
- Characterize the most important emission, fate and transport processes of Marine Litter (including microplastics) and the most promising techniques to model and monitor these;
- Assess the most important impacts of Marine Litter (including microplastics) on ecosystems, human health and the economy, and indicate relevant knowledge gaps;
- Characterize the most important sea-based sources of Marine Litter and indicate promising strategies to address these;
- Select and design useful strategies to address Marine Litter by making a result chain for a particular situation;
- Indicate the possibilities and limitations of market-based instruments, laws & regulations and corporate responsibility for addressing Marine Litter issues;
- Indicate technical solutions as well as the most important misconceptions
- Collaborate with people of varying backgrounds to develop a management plan for addressing a local or specific Marine Litter issue.

Target Groups and Tracks

The Leadership Track takes 2 weeks, each with a work load of approximately 5 hrs. The track presents a generic overview of Marine Litter and provides you with the essential knowledge, insights and skills needed to play a leading role in the transition to a Marine Litter-free society. The track presents inspiring examples of organisations and people from varying backgrounds that take responsibility and play a leading role in tackling Marine Litter, e.g. as a policy maker, a researcher, an artist or a CEO of a large company.

After finishing the Leadership Track, you can continue with the Expert Track, which takes 6 additional weeks and having a total workload of approximately 40 hours (5 hrs/week). This track provides more in-depth information on Marine Litter and is intended for people who want to work actively on Marine Litter issues, e.g. policy makers, researchers, environmental professionals, teachers, NGO representatives, students or citizens with a particular interest in the topic. This track prepares you for an active role in addressing marine litter by providing you with in-depth knowledge, useful tools and instruments and connecting you to marine litter networks around the globe.



Entry Levels and Requirements

In order to complete this MOOC, you will need:

- A computer that is connected to the Internet.
- Time: you will be working approximately 4-5 hrs per week on the MOOC. The Leadership takes 2 weeks and the Expert Track 8 weeks in which you will study six Blocks (you can select two out of the last four Blocks). Each track is concluded with a final assignment, which takes approximately 4 hrs for the Leadership Track and 10 hrs for the Expert Track.
- The course is taught at bachelor's level. This implies that you will need some general knowledge of the world around you, e.g. basic knowledge about biology, chemistry, physics, economics and the social sciences. If you have completed high school, you should be fine.
- The course is taught in English. You will not only need to understand English, but also be able to read, speak and write in the English language.
- Collaborative skills: you will be working together with other students.
- Motivation and engagement.

Course Structure

The course structure is illustrated in Figure 1. The MOOC is structured around two main themes, 1. Getting to Know Marine Litter, which focuses on the description and analysis of marine litter issues, and 2. Solving Marine Litter, which focuses on measures and strategies to address marine litter. Each theme is addressed in 4 blocks, resulting in 8 course blocks in total:

- Block 1 introduces you to the world of Marine Litter;
- Block 2 gives an overview of the strategies and measures to prevent and reduce Marine Litter;
- Block 3 deals with the sources, fate, modelling and monitoring of Marine Litter;
- Block 4 provides detailed insight into the impacts of Marine Litter on ecosystems, human health and our economy;
- Block 5 presents the current state-of-knowledge on microplastics;
- Block 6 describes the characteristics and management of sea-based sources of Marine Litter;
- Block 7 focuses on the role of leadership and effective strategies to prevent and reduce marine litter;
- Block 8 discusses different tools and instruments to deal with marine litter.



Figure 1: Structure of the Massive Open Online Course on Marine Litter

From the start of the MOOC, we will release one new block every week. Each block consists of 2 learning units, each with a study load of approximately 2.5 hrs. A learning unit consists of a number of study tasks, e.g. watching a video, reading a text and making an assignment (Figure 2).

Block 1	
Unit 1.1 (2 hrs)	Unit 1.2 (2 hrs)
Study Task 1.1.1	Study Task 1.2.1
Study Task 1.1.2	Study Task 1.2.2
Study Task 1.1.3	Study Task 1.2.3
Study Task ...	Study Task ...

Figure 2: Block structure

Study Load

The Leadership Track has an overall estimated study load of approximately 14 hrs, i.e., 5 hrs to complete Block 1, 5 hrs to complete Block 2, and 4 hrs to complete the Leadership Final Assignment.

The Expert Track has an overall estimated study load of approximately 40 hrs, i.e., 6 times 5 hrs to complete 6 course blocks and 10 hrs to complete the Expert Final Assignment. The expert track includes:

- the two blocks of the Leadership track; these are compulsory (10 hours)
- the first two blocks (Blocks 3 and 4) of the expert track are also compulsory (10 hours)
- the last four blocks will be released simultaneously and you need to select two of them. If you are interested you can of course always study the remaining two blocks too.

Please note that these study load estimates represent minimum estimates and do not include optional learning activities. Study loads may vary depending on your personal background, learning skills, computer facilities, English language skills and the amount of time you want to invest in the Final Assignment.

Final Assignments

The Leadership and Expert Tracks both conclude with a final assignment.

The Final Assignment of the Leadership Track is an individual assignment with an estimated workload of approximately 4 hrs. The student selects a Marine Litter case fitting his or her personal interest, analyses the problem using the DPSIR framework, identifies and

assesses different strategies to address the problem, and specifies his or her role as a leader. The Final Assignment of the Expert Track can either be done in a group or individually. We encourage students to collaborate in groups since this best resembles the real world situation where a collaborative effort is often required to solve Marine Litter issues effectively. Students are asked to develop an action plan to address a local or specific marine litter issue.

Certificate of Participation

Students completing all study tasks, including the Final Assignment, will receive a Certificate of Participation within 4 weeks after they have submitted their final assignment. Students submitting a Leadership Final Assignment will receive a Certificate of Participation for the Leadership Track; students submitting an Expert Final Assignment will receive a Certificate of Participation for the Expert Track.

Schedule and deadlines

The fourth run of the Massive Open Online Course on Marine Litter starts on Monday, October 26, 2020. Each consecutive week, we will release one new course block. The last four blocks will be released simultaneously on Monday, November 23, 2020.

The Final Assignment of the Leadership Track must be submitted within two weeks after completion of Block 2, i.e. before Sunday, November 22, 2020. The Final Assignment of the Expert Track must be submitted within four weeks after completion of the Blocks (you have 8 weeks to finish 6 Blocks), i.e. before Sunday, January 17, 2021.

Enrolment and Learning Materials

During this course, we will be using the Trifork platform. Once you have enrolled for the MOOC you will have a login and a password to log on to the platform. Here you will find all learning materials such as videos, documents, presentations and assignments. There is also a discussion forum and an event section. The learning materials are organized in study tasks. To start the course, simply start with Study Task 1.1.1. After completion, move to the next study task. In this way, you will automatically be led through the course.

Some final important notes

We recommend you to make all assignments of the Blocks you will study, however the assignments will not be graded.

We clearly mark the must read material. Other material is marked as "highly recommended extra materials" and also additional resources are provided to you.



'Many of us ask what can I, as a person, do, but history shows us that everything good and bad starts because somebody does something or does not do something'.

Sylvia Earle

Contact & Questions

Please post your questions on the Discussion Forum of the Course website. There are separate sections for: (1) discussing marine litter issues, (2) informative questions about the organization of the course and (3) technical questions about the course platform. Students are encouraged to answer the questions of fellow students.