



Project Number: 101048546

Project Acronym: MPCS

Project title: Marine Pollution Control Simulator

Progress Report 1

Deliverable 1.1

Version 2.0

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Period covered by the report: from 01-03-2022 to 30-11-2022

Progress Report: 1st





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History of Changes

Table 1: History of changes

Version	Publication date	Changes
1.0	30.11.2022	Initial version for discussion and submission
2.0	03.01.2023	1.1. Objectives – comprehensive review and alignment with track 2 of the call 2.1. Work carried out – clarifications related to the places where the activities took place and access to databases. 2.3. Links of project website and other relevant posts 2.8. Liaison with other projects - this topic has been added to describe the more relevant projects to MPCS, in the scope of the AKT.





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Contractual aspects

Project: Marine Pollution Control Simulator (MPCS)

[MPCS - Qualiseg \(grupoqualiseg.com\)](http://grupoqualiseg.com)

Deliverable: D1.1 – Progress Report 1

Work package: WP1 – Project Management and Coordination

Task: 1.1 – Management and Coordination

Confidentiality: Public

Version: 1.0

Contractual Date of Delivery to the EC: 30.11.2022

Actual Date of Delivery to the EC: 30.11.2022

Leader entity – Qualiseg

Participant(s) – Project Coordination Team members

Collaboration – All consortium partners

Author(s): José Daniel, Rui Sampaio and Manuel Carrasqueira (QUALISEG).





Legal Disclaimer

The project Marine Pollution Control Simulator (MPCS), No. 101048546, has received funding under the Union Civil Protection Mechanism, Call: UCPM-2021-PP — Prevention and Preparedness Projects on Civil Protection and Marine Pollution, from the European Union (EU), represented by the European Commission (EC).

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1. MPC'S planned work and overview

1.1. Objectives

The MPC project aims at developing a cloud-based tool easily reachable through different platforms (mobile, tablet, or laptop), that allows the provision of training, exercising, assessment, and performance evaluation of marine pollution control, at different levels, namely:

- a. Collective and Individual competence.
- b. Regional, National, and Supranational levels.
- c. Small and large-scale scenarios.

Having in mind that the main general objectives of the UCPM-2021-PP are to:

- a. Achieve a high level of protection against disasters by preventing or reducing their potential effects, by fostering a culture of prevention and by improving cooperation between the civil protection and other relevant services,
- b. Enhance cooperation and coordination in the area of preparedness at Member State and Union level to respond to disasters,
- c. Facilitate rapid and efficient response in the event of disasters or imminent disasters, and
- d. Increase public awareness and preparedness for disasters,

MPCS project will contribute to help on reaching these objectives by the development of Training and Exercising activities and the Response Capacity Assessment (RCA) of the involved actors.

Once the general objective for Topic 2 of the above referred UCPM focuses on enhancing prevention of and protection from the effects of maritime disasters, the MPC project can play an important role by providing training, exercising, assessment, and performance evaluation of the marine pollution control. Moreover, MPC addresses and contributes to the general objectives and themes & priorities of this Topic 2, by:



- a. Introducing innovative teaching and training methodologies;
- b. Promoting structured and permanent collaboration frameworks between all relevant actors in the field of Marine Pollution Control.

1.2. Work planned

As illustrated in *Fig. 1*, the project will encompass 3 work packages of technical nature related to the training development (from WP2 to WP4), and 2 transversal work packages (WP1 and WP5), focusing on Project Management and Coordination, and Dissemination, Communication & Visibility, respectively.

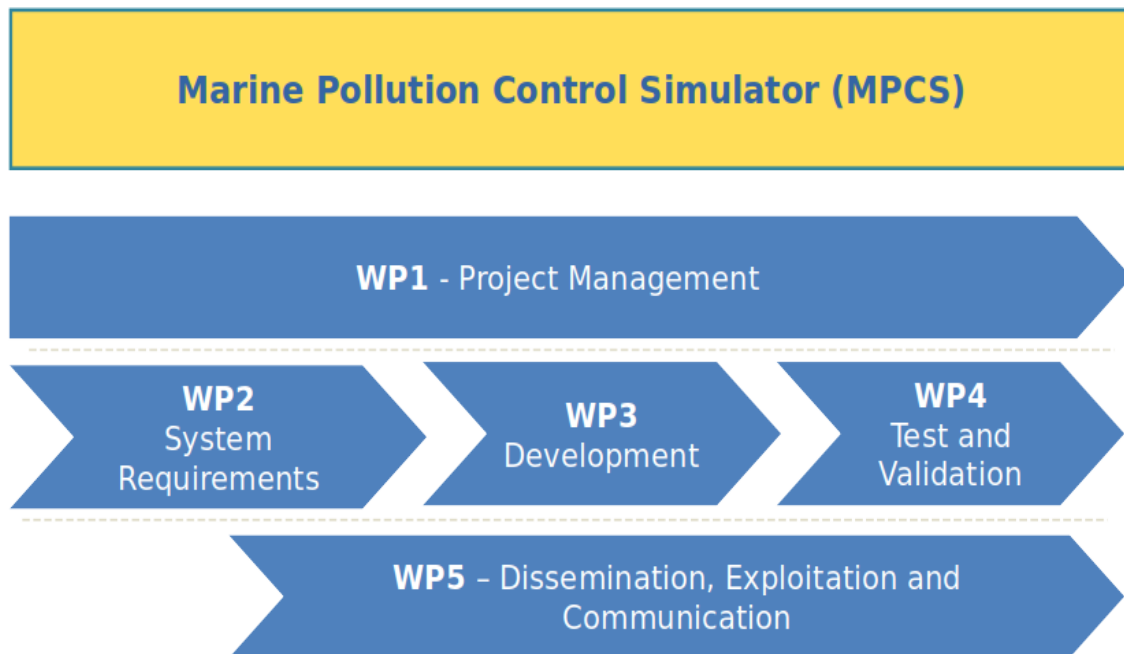


Figure 1: The MPCs's Work Packages (WP's)



The project's plan as in the Grant Agreement, may be observed in the figure 2 below.

ACTIVITY	MONTHS																							
	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	M 13	M 14	M 15	M 16	M 17	M 18	M 19	M 20	M 21	M 22	M 23	M 24
WP1 – Management and Coordination	[Yellow]																							
T's 1.1 to 1.3 – full proj. durat.	[Yellow]																							
WP2 – System Requirements	[Yellow]																							
T2.1. Sit. Analysis	[Yellow]																							
T2.2. Sim. Req's	[Yellow]																							
T2.3. Op. Req's	[Yellow]																							
WP3 – Des. & Dev. (D&D)	[Yellow]																							
T3.1. Sim. Structure	[Yellow]																							
T3.2. GBL solution	[Yellow]																							
T3.3. MPCs Beta version	[Yellow]																							
WP4 – Tests & Validation	[Yellow]																							
T4.1. Tests specification	[Yellow]																							
T4.2. Math. models valid.	[Yellow]																							
T4.3. MPCs validation	[Yellow]																							
WP5 – Dissem., Comm. and Visibility	[Yellow]																							
T5.1. Project website	[Yellow]																							
T5.2. Promotion events	[Yellow]																							
T5.3. Tech. Dissem. docs	[Yellow]																							

Figure 2: MPCs plan as in the Grant Agreement





2. Work carried out and overview of the progress

2.1. Work carried out during the last 9 months period

Between 01 March and 30 November 2022, the following activities have been carried out:

1. On February 7 and 8, Rui Sampaio, from Qualiseg, attended a training program on Pollution Control at the facilities of the Directorate for Combating Sea Pollution (DCSP), based in **Lisbon, Portugal**, which is the most important operational organization in Portugal with the responsibility to fight marine pollution. At this course, we had the opportunity to have a close look to the actual procedures and equipment used in pollution control at an estuary and at a beach.
2. On April 13, a meeting took place at Coimbra University (**Coimbra, Portugal**) with the presence of Rui Sampaio and Miguel Moreira, from Qualiseg, and Licínio Roque, Fernando Ramos, Luís Pereira, João Barata, Pedro Martins and Jorge Cardoso from Coimbra University Informatics Faculty. The objective of the meeting was the presentation by the Technical Coordinator, Rui Sampaio, of the main ideas about simulator functional requirements to access their viability from the responsible for simulator development. The problems addressed were mainly the simulator objectives, the representation of the real world, the interactions between users and between users and equipment on their job of pollution control (coordination, communication and procedures of logistic, technical and administrative nature) in a virtual world and the simulation of the oil spill drift and its interaction with the booms, skimmers and coast.
3. On May 5, Rui Sampaio went to Viana do Castelo (**Portugal**) to assist to the Atlantic Porex 2022, a pollution control exercise that Portugal organizes every year, to acquire some insight into the coordination, communications and procedures that are usual in this type of situations.
4. On May 11, Rui Sampaio had a meeting at the headquarters of the DCSP (**Lisbon, Portugal**) with Joana Gerónimo and José Santos, both Navy Officers. The objective of the meeting was to reflect about what we saw at Viana do Castelo exercise, understand what they believe that are the weaknesses of the pollution control in Portugal and acquire further knowledge about coordination in pollution control.



5. On May 13, there was a remote meeting with the presence of Rui Sampaio, Miguel Moreira, Manuel Carrasqueira and José Daniel, from Qualiseg and Lauren Vandermeer and Yolanda Fernandez from EVM to define the 3 types of e-learning modules to be developed within the scope of this project, that is, modules for training in pollution control, one module for simulator administration and other for simulator operation. Some ideas of themes for e-learning modules were presented and it was agreed that by the end of May EVM would send a proposal of a framework for e-learning modules development for further discussion.
6. On June 1, José Daniel and Rui Sampaio participated in a meeting held at EMSA (**Lisbon, Portugal**). The objective of the meeting was the presentation of the project, exchange ideas about the weaknesses of the pollution control of the member states and ask for access to some databases managed by EMSA. The MPCS project was presented and after there was a fruitful discussion about some specific aspects of the project. Regarding the database managed by EMSA, the access has been provided by DCSP. The analysis of that database, evidenced that, for the purpose of the MPCS project and its comprehensiveness, it would be important to invest in a more complete and detailed database, such as the World Catalog of Oil Spill Response Products (see 11., below).
7. From the beginning of the project until the end of May, there has been an important focus on the Situation Analysis update, which report has been submitted on the 15th of June.
8. On month 2, the Simulator Functional Requirements and the Simulator Operational Requirements Specification were started to be developed and systematized, being finalized by the end of August; the respective deliverables were been submitted on the 15th of September.
9. On 26 September Rui Sampaio made a technical visit to the Portuguese School of Firefighters (*Escola Nacional de Bombeiros – ENB, Sintra, Portugal*) to have a demonstration of the ENB's simulator. Several differentiation factors have been made clear as in the specific report delivered on the proper time.



10. EVM partner delivered the e-learning module "Spanish Organization, Regulation and Legislation for Marine Pollution Control" and for that they developed closed contacts with the sea pollution authorities at **Canary Islands, Spain**.
11. After the update of the relevant available systems and equipment, the World Catalog of Oil Spill Response Products has been selected and its acquisition has been executed on the 17th of October.
12. During the development of the Situation Analysis task, became clear the relevance of integrating the **Mohid Water Modeling System into MPCS**, instead of two equipment module simulators (firstly considered in the MPCS proposal). After the proper articulation with the Project Officer, became clear that this positive change can be implemented without a need for a specific amendment, therefore the formal steps to acquire Mohid have been initiated.
13. The project website started to be designed at the beginning of the project, and has been developed until the project's month 6. The project website has become publicly available in the middle of September, even though the related deliverable has been submitted only by the beginning of November.
14. Quarterly, as a base, coordination meetings involving the Project Coordination Team (PCT) take place, to make sure that all activities are running as expected and as smoothly as possible; respective reports are available.

In conclusion, all planned activities have been timely developed. The project activities of WP2 (System Requirements) are completed, and the activities of WP1 (Project Management and Coordination), WP3 (Design and Development) and WP5 (Dissemination, Communication & Visibility) are underway and running properly.

2.2. Work progress

As shown in *Fig. 3*, at this project's stage the activities expected to be executed are either under the scope of the WP3 (Design and Development) or WP5 (Dissemination, Communication & Visibility), all of them running as planned, supported on the necessary project coordination/management activities (WP1 - Project Management and Coordination).



Additionally, it is important to refer that members of Coimbra University are going to be involved on the Pollution Combat practical exercise (Dec 5) and will attend the Pollution Combat First Responder course (Dec 7). By these actions' typology, we are trying to capacitate all consortium members on the Pollution Combat speciality.

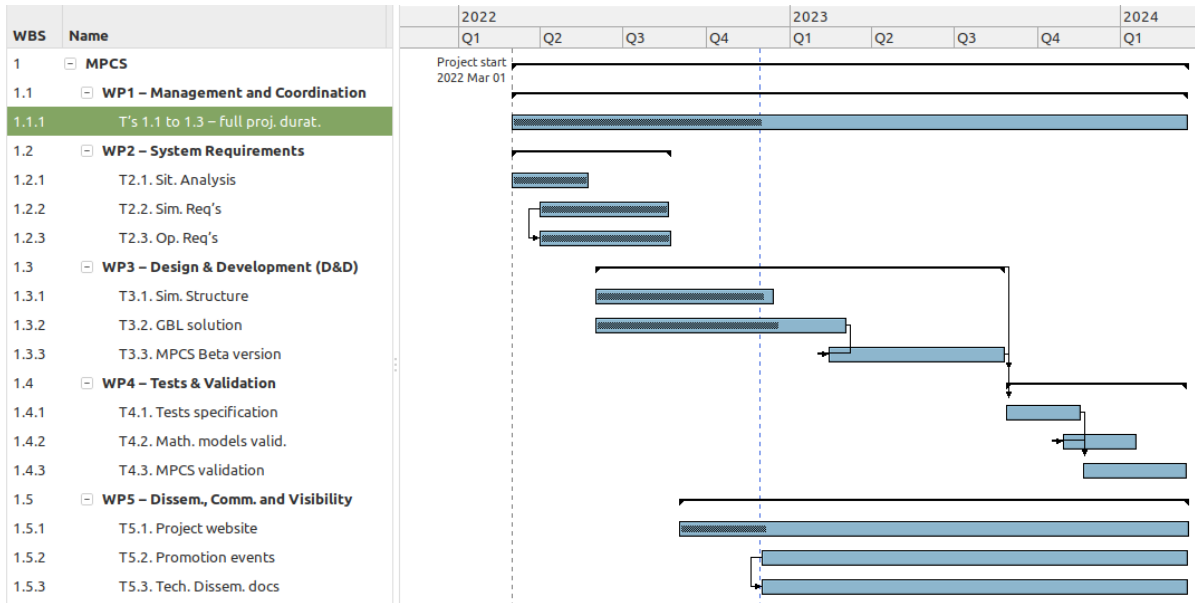


Figure 3: Project's Gantt chart on Nov 30

2.3. Explanation of the work carried per WP

Work Package 1 – Project Management and Coordination

- As detailed in 2.1. and shown in figure 3, the expected activities were executed according with planning.
- Regular Coordination Meetings have been held, and the respective minutes archived.
- During the period covered by this document the unique deliverable planned to be submitted is this Periodic Progress Report - D1.1 (please refer to 2.4.1 Deliverables).





Work package 2 – System Requirements

- The activities defined on this WP are:
 - Task 2.1 – Situation Analysis
 - Task 2.2 – Simulator Functional Requirements Definition
 - Task 2.3 – Simulator Operational Requirements Specification
- As detailed in 2.1. and shown in figure 3, all the expected activities of this WP2 were executed / completed, and the respective deliverables submitted.

Work package 3 – Design and Development

- The activities defined on this WP are:
 - Task 3.1 – Simulator Structure Design and Development
 - Task 3.2 – Game-based Solution Development
 - Task 3.3 – MPCS Beta Version Development
- As detailed in 2.1. and shown in figure 3, as planned, the Tasks 3.1 and 3.2 are under-way and running properly.
- As planned, the Tasks 3.3 will start by M14.

Work package 4 – Test and Validation

- As planned, the WP4 activities were not initiated yet.

Work package 5 – Dissemination, Communication & Visibility

- The activities defined on this WP are:
 - Task 5.1 – Project Website
 - Task 5.2 – Promotion events
 - Task 5.3 – Technical Dissemination Documents.
- As shown in figure 3, only Task 5.1 has been started as planned, as follows:



- Task 5.1 – Project Website
 - (1) The operational setup of MPCS's Project website was achieved in last August, as planned.
 - (2) The design, development, and operational setup of the project's website and of the digital networks have been performed, and keep running, with the help of subcontracted specialised services.
 - (3) Since August MPCS's Project website has been systematically consolidated and improved to a more elaborated and extensive version, and the website content has been continuously updated in accordance with the current needs and developments. This is an ongoing activity until the end of the project.
 - (4) The MPCS's Project is being promoted by Qualiseg and IPTL through the Partners' social media accounts (e.g., Facebook, LinkedIn and Twitter), through the project and Partners' newsletters and press releases, as well as through the project and partners' websites. The relevant links to the project website, partners websites and social media posts, are the following:
 1. <https://grupoqualiseg.com/en/mpcs-2/>
 2. <https://grupoqualiseg.com/kick-off-for-marine-pollution-control-simulator-mpcs-project/>
 3. <https://iptl.pt/marine-pollution-control-simulator/>
 4. https://www.linkedin.com/posts/grupo-qualiseg_environment-experience-project-activity-6912352127822483456-FNFg?utm_source=share&utm_medium=member_desktop
- Task 5.2 – Promotion events

As Planned, the activities of this task were not initiated yet.
- Task 5.3 – Technical Dissemination Documents

As Planned, the activities of this task were not initiated yet.



2.4. Summary of deliverables and milestones

All planned deliverables and milestones have been executed and submitted with a little delay, mainly due to the August's annual leave.

2.4.1 Deliverables

Table 2: Deliverables

Deliverable Number	Deliverable Title	WP Nr	Lead Beneficiary	Type	Dissemination Level	Due Date (in months)	Comments
D2.1	Situation Analysis Report	2	1 – QUALISEG	Report	Public	3	CONCLUDED
D2.2	Functional Requirements Report	2	1 – QUALISEG	Report	Public	6	CONCLUDED
D2.3	MPCS Simulator Operational Requirements Specification	2	4 – UNIV. COIMBRA	Report	Public	6	CONCLUDED
D5.1	Project Website	5	2 – IPTL	Report	Public	7	CONCLUDED
D1.1	Periodic progress report 1	1	1 – QUALISEG	Report	Public	9	CONCLUDED

2.4.2 Milestones

Table 3: Milestones

Milestone Number	Milestone Title	WP Nr	Lead Beneficiary	Due Date (in months)	Means of Verification	Achieved?
MS1	MS1.1 Kick-off meeting	WP1	1 – QUALISEG	1	Meeting report	YES
MS2	MS2.1 Submission of Situation Analysis Report	WP2	1 – QUALISEG	3	Report	YES
MS3	MS2.2 Submission of Simulator Functional Requirements Report	WP2	1 – QUALISEG	6	Report	YES
MS4	MS2.3 Submission of the Simulator Operational Requirements Specification	WP2	1 – QUALISEG	10	Report	YES
MS10	MS5.1 Website Operational	WP5	1 – IPTL	7	Website and social media accounts	YES



2.4.3 Summary of exploitable results

In accordance with the project's schedule of activities, at this stage of the timeline, it was not expected to achieve any exploitable results.

2.5. Impact

At this stage of the project's development, there are no expected impacts to report. The information in section 2.1 of the Annex 1 (Description of the Action – DoA) of Grant Agreement does not need to be updated.

2.6. Delayed activities to the project planning

Nothing to refer. At this stage, all activities are in line with planned work.

2.7. Advanced activities to the project planning

Nothing relevant to refer.

2.8. Liaison with other projects

MPCS is closely related/linked with the **Atlantic Knowledge Triangle (AKT)**, an output of the MarLEM project (started in 2021). This Knowledge Triangle Network involves entities from Industry, Universities and port-maritime and education Authorities, constituting a “platform” that promotes effective initiatives and opportunities for Knowledge creation and dissemination. In the AKT framework and with a clear focus on skills and competences development, we are involving more than 40 organizations (mainly centred in the Atlantic Area) to launch some important initiatives, such as:

- The **Atlantic Centre of Vocational Excellence (ACoVE)** – this project is seeking for funding in the scope of the Erasmus+ Programme and involves, directly, 21 dif-



ferent organizations (SMEs, port-maritime clusters, universities, apprenticeship schools, authorities) from 9 countries.

- The **Atlantic Maritime Research Centre (AMRC)** is a project proposal that aims at developing an Excellence HUB for Port-Maritime Research and Innovation (PMR&I), with its “epicentre” at the EU Atlantic ultra-peripheral regions of Azores, Cabo Verde, Canary and Madeira Islands. AMRC involves, directly, 19 different organizations (SMEs, port-maritime clusters, universities, apprenticeship schools, authorities) from 6 countries
- **Capacity Building in the field of Maritime Vocational Education and Training (CBM-VET)** is a project (to be developed until Dec 2024) that involves port-maritime organizations from São Tomé and Príncipe (STP) that aims at increasing the country’s port-maritime skills and competences.

It is a clear objective **to promote and deploy MPCS** also in the broad space of AKT and in the specific reality of the above-mentioned projects. MPCS will be an important tool that will surely be exploited by the port-maritime apprenticeship schools to raise individual and collective competence in the field of the marine pollution control.

3. Conclusions and Recommendations

From the above-referred facts and evidence, it can be concluded that the project is accomplishing, so far, the established objectives.

All the activities, deliverables and milestones were executed in accordance with the project planning.

Particular relevance for the establishment of connections and liaisons with other projects and for the raising of new ideas in the scope of the Atlantic Knowledge Triangle (AKT).

Having these conclusions in mind, the main recommendation is to keep pace and look for improving and innovative opportunities.

