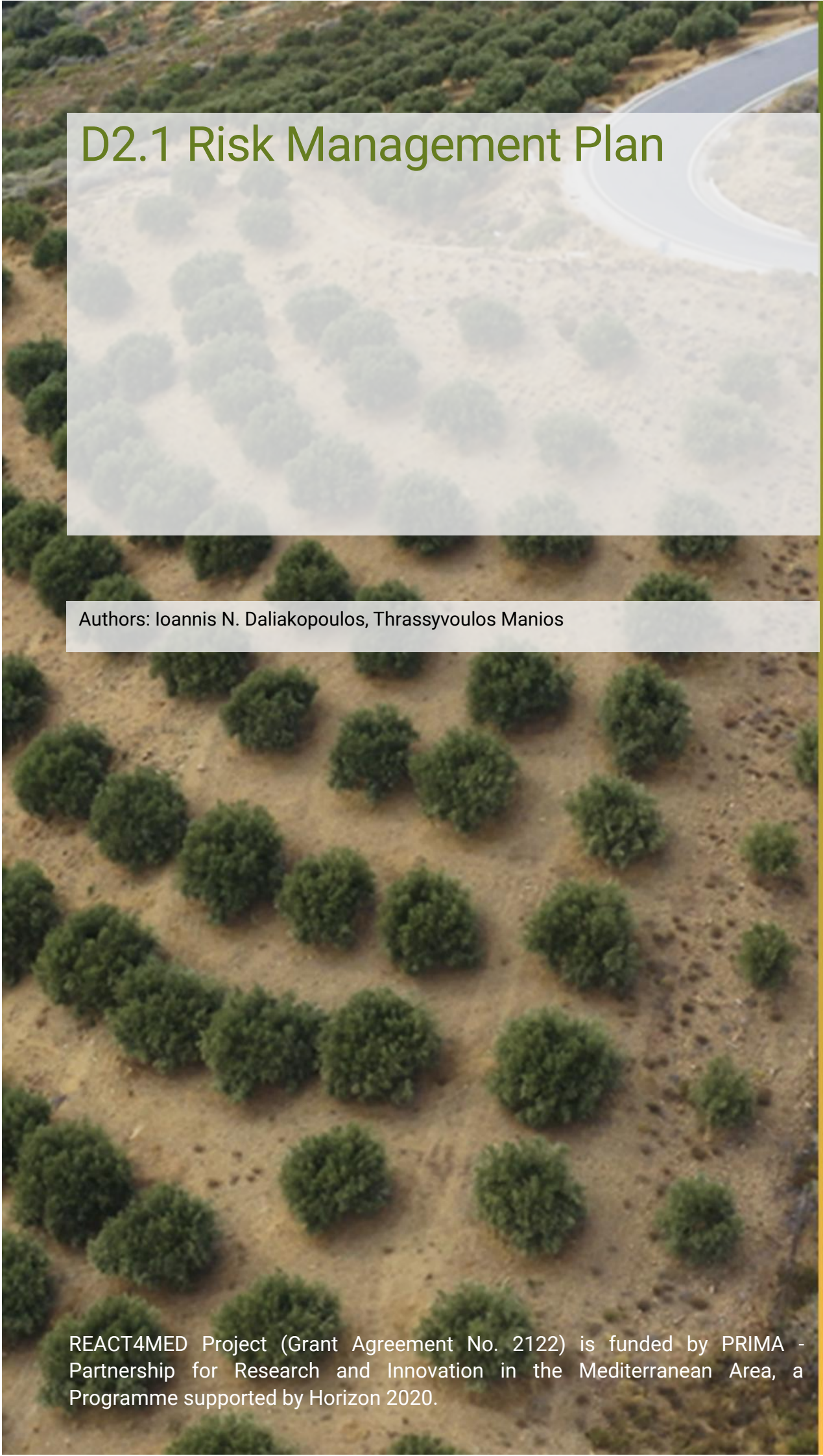

D2.1 Risk Management Plan

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PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

REACT4MED

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1.0	2022.09.25	ID_HMU	First version of the RMP
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Table of Contents

Executive Summary

The purpose of the REACT4MED Risk Management Plan document is:

- To outline the risk approach and process to be used for REACT4MED;
- To identify the roles and responsibilities related to risk management;
- To specify the methodology, standards, tools, and techniques used to support risk management.

The document provides a table of the risks foreseen during the proposal phase of REACT4MED, and templates for documenting unforeseen risks and the state of play for Risk Mitigation.

This document will be updated during the lifetime of REACT4MED, thus functioning as a Risk Log.

1 Introduction

The REACT4MED Risk Management Plan defines and documents the REACT4MED Risk Management Process. It describes how risks will be identified and assessed, what tools and techniques can be used, what are the evaluation scales and tolerances, the relevant roles and responsibilities, how often risks need to be revisited, etc. The Risk Management Plan also defines the risk monitoring and escalation process as well as the structure of the Risk Log which is used to document and communicate the risks and their response actions.

2 Risk Management Objectives

Risk management brings visibility to risks and accountability as to how they are handled, and ensures that project risks are proactively dealt with and regularly monitored and controlled.
The main objectives of the REACT4MED risk management are:

- Project risks are identified, assessed, approved and reported throughout the lifetime of the project;
- All major risks are reported to the REACT4MED Coordination;
- All risks are monitored and under control;
- Risk response actions are implemented effectively.

3 REACT4MED Risk Management Action Plan

The project risk management process defines the activities to identify, assess, prioritise, manage, and control risks that may affect the execution of the project and the achievement of its objectives. This process is divided into four steps:

3.1 Risk Identification

The purpose of this step is to facilitate the identification and documentation of risks that can impact the project objectives. Risk identification is conducted using desk reviews, brainstorming, assumption analysis, etc. Risks are continuously identified throughout the project lifecycle; however, as early as the proposal stage of REACT4MED, an initial risk list has been created which is thereafter frequently updated. The same process will be followed both for the creation of the Risk Log as well as for the inclusion of new risks later in the project. The Risk Log contains the Risk Number, Description, concerned WP and Proposed risk-mitigation measures.

3.2 Risk Assessment

The purpose of this step is to assess the likelihood and impact of the identified risks in terms of their influence to the project objectives. This assessment is necessary before any risk response planning can be done.

Risks are assessed based on their likelihood of occurrence and the impact in project objectives. The product of their likelihood and impact defines the Risk Level, which is then used as a reference for their prioritisation and risk response development.

The exposure to a given risk is estimated using the risk matrix in Figure 1. Concerning each of the risks, the Project Manager, in collaboration with the WP leaders, will estimate the probability they could become problems (Low/Medium/High).

		Impact		
		1=Low	2= Medium	3=High
Likelihood	3=High	3	6	9
	2=Medium	2	4	6
	1=Low	1	2	3

Legend:

	Risks can be accepted; contingency plans may be developed.
	Risks cannot be accepted, a risk response strategy should be developed (avoid, reduce, transfer/ share)
	Critical – immediate risk reduction or avoidance response
- - - -	Acceptable risk

Figure 1: REACT4MED Risk Assessment Table.

3.3 Risk Response Development

The purpose of this step is to select the best risk response strategy and identify and plan the actions to control the risks.

The selection of the risk response strategy will be based on the results of the risk assessment (risk level), the type of risk, on the effects on the overall project objectives (e.g., schedule and costs), as well as on the cost of the strategy and its benefits (cost/benefit analysis). The strategy (or strategies) selected for each risk are documented in the Risk Log.

There are four strategies to be considered as risk responses: Reduce, Avoid, Transfer, or Accept a risk. For the risks that have been accepted, contingency plans may be defined to help control their impact in case they occur.

After the strategy for each risk has been selected, specific actions to implement the strategy will be defined, described, scheduled, and assigned, while a Risk Owner assumes the responsibility for its implementation.

Actions will detail concrete activities, milestones and deliverables and will be documented in the Risk Log. Moreover, they will clearly identify the target resolution date, as well as the estimation of resources involved and dependencies. These actions (at least the most effort/cost consuming ones) will be incorporated into the Project Work Plan, to have a consolidated view of all project related activities.

3.4 Risk Control

The purpose of this step is to monitor and control the implementation of the risk response activities while continuously monitoring the project environment for new risks or changes (e.g., probability and/or impact) in the risks already identified.

The Project Follow-up Meetings are used to revise the status of risks and related actions, and to identify new risks that can impact project milestones, deliverables, or objectives. The review of the Risk Log also appears in the agenda of the Project Review Meetings. Risks will be revised at regular predetermined intervals, but also after the occurrence of any event that might have a significant impact on the project environment and hence the project risks. The updating of the Risk Log can include adding new risks or actions, updating the status of response activities, changing risk levels based on mitigation actions, changing the assignment of actions, etc.

The Risk Owner will report periodically the status of the risk and any response activities to Project Coordination.

The Project Manager (PM) will report to the Project Steering Committee (PSC) the status of the major risks and to other project stakeholders (as per the project's communications plan). If any of the identified risks occur, then the Project Manager (PM) will ensure the implementation of the contingency plans and communicate the issue to the Project Steering Committee (PSC).

The activities described above are performed by the Project Manager (PM) throughout the project lifecycle in line with the Risk Management Plan.

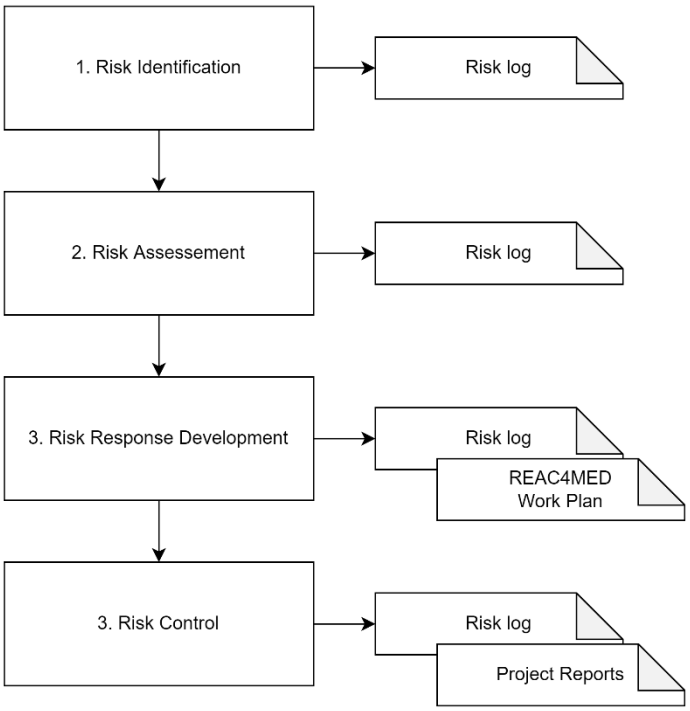

Figure 2: REACT4MED Risk Management Processes.

4 Risk Management Roles and Responsibilities

The detailed REACT4MED Management Structure is outlined in the REACT4MED Grant Agreement.

Similar to global project management responsibility, the Project Management Board (PMB) is responsible for identifying, assessing, managing and monitoring the risks of the project, consulting the project team when appropriate (e.g., Project Partners, General Assembly, Science and Innovation Advisory Board).

The planning of risk management activities is performed by the Project Coordination and documented in the Risk Management Plan. New risks and related actions, as well as changes to identified risks and actions are approved by the Project Coordination and reported to the Project Management Board, according to the escalation procedure:

1. All new risks, proposed risk response strategies and proposed actions are approved at WP or PA level if the risk level is lower that 3
2. All new risks, proposed risk response strategies and proposed actions are approved by the PMB if the risk level is greater or equal to 3
3. If the risk level is 9 then risks and related actions are escalated to PRIMA-IS. The Project Coordination and PRIMA-IS will validate the identified risks and actions, and plan other actions, if adequate.

The global project management responsibility relies on the REACT4MED **Project Management Board** (PMB), composed by the Project Coordinator (Prof. Dr Thrassyvoulos Manios) and the Deputy Coordinator (Assistant Prof. Dr Ioannis Daliakopoulos), the **WP Leaders**, and the **Pilot Area Leaders**, and ensures the day-to-day

management of the project. The PMB meets regularly (every three months) or as needed and oversees WP Task planning, budget, and effort allocations; approving and releasing deliverables; approving the content and release of press articles and joint publications; deciding on protection and access rights to innovation and knowledge based upon the Consortium Agreement; arbitrating on deadlock situations and addressing financial and administrative issues. Besides Coordination, the Project Partner (PP) representatives involved in the PMB will be nominated at the kick-off meeting.

The **General Assembly** (GA), is the ultimate decision-making body in REACT4MED, composed of one representative per partner (PIs) and chaired by the Project Coordinator. In normal circumstances, one annual meeting will be scheduled face-to-face, and each 6 months it will meet online. Decisions within the General Assembly will be taken upon 2/3 majority, each partner having one vote, with the coordinator having a casting vote if necessary. The GA will also keep an open communication stream with the engaged stakeholders to inform them of relevant project progress and activities.

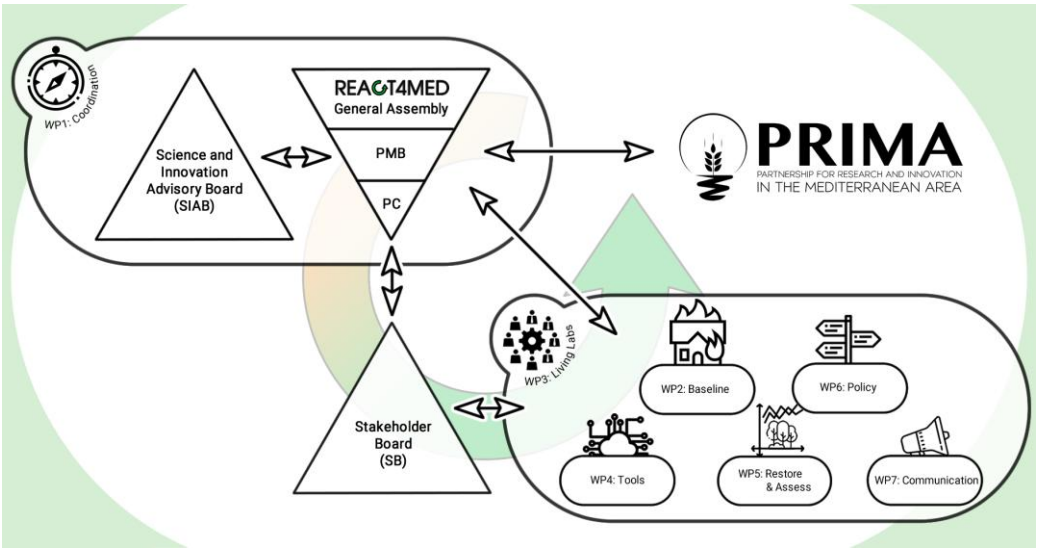

Figure 3.3: Management structure of REACT4MED.

The **Project Coordinator** is responsible for the scientific and technical as well as the administrative management, reflected by the WP1 structure and tasks. In a consortium of the given size and the ambitious work plan, the Project Coordinator, assisted by the Deputy Coordinator, secures the most efficient and seamless management. The proposed Project Coordinator, Prof. Dr Thrassyvoulos Manios is Vice-Rector of HMU and Full Professor at the Department of Agriculture of HMU. He has over 20 years of experience is scientific and applied research and innovation in integrated water and wastewater management. The Deputy Coordinator, Dr Ioannis Daliakopoulos, has been involved as coordinator or PI in several European and National projects. The role of the coordinator is defined in the Rules for Participation and the Grant Agreement.

The **Work Package Leaders** of REACT4MED will translate decisions of the PMB to management tasks, and organize meetings with the WP participants, when required. Regular teleconferences within/ between the WPs will take place and physical meetings of WP teams will take place as side-events during GA meetings held annually. WP Leaders will be responsible for management and technical coordination of their WPs, sharing information (deliverables, progress, statement of expenditure) with the PMB, taking decisions on technical methods, models and tools to be used, representing the consortium at conferences, workshops and dissemination events related to the WP, coordinating WP Tasks and ensure effective communication amongst participants as well as prevising and assessing progress against objectives according to the factual and verifiable project milestones listed in Table 3.2a.

The **Pilot Area Leaders** are responsible for execution of the project work in their Pilot Areas, for all WPs. They lead the pilot area teams, which consist of all persons who work in the pilot area for the different WPs, and they coordinate activities in the pilot area in such a way that results for the different WPs are provided on time to the respective WP Leaders. Pilot Area Leaders will have regular contact to ensure that optimum collaboration between pilot area is achieved. Pilot Area Leaders report to the PMB when asked, or on their

own initiative, when the continuation and/or quality of the work in the pilot area is endangered. In that case, the project coordinator will solve any issues together with the corresponding Pilot Area Coordinator. If needed, the PMB will be consulted.

Science and Innovation Advisory Board: REACT4MED establishes the Science and Innovation Advisory Board (SIAB) of distinguished experts in the domains of the project. The advisory board will consist of a mixture of high-level researchers and stakeholders active in the research domain. It will advise the PMB on the central scientific scope and direction of REACT4MED, and on research design issues, taking account of new scientific developments and insights. Approved members will be appointed either for the duration of the Project or for the duration of a specific task assigned to the SIAB. Meetings of the board will be linked to General Project Meetings. The travel expenses of non-European members, where possible will be covered by coordinating project meetings with other events, which will be attended by SIAB members, thus there is no extra burden in the budget. The main tasks of the scientific advisory board will be to ensure the link between the corresponding stakeholders and the REACT4MED project deliverables and results (incl. dissemination), ensure quality and coherence of the research achievements, ensure Coordination between programmes and initiatives at the EU level, ensure an impact and exploitation of the results. Starting from a core list of advisors (see Section 3.3), SIAB members will be selected at the Kick-Off meeting.

Stakeholder Board: A Stakeholder Board (SB) will be formed upon the establishment of all the REACT4MED ERLLs at each Pilot Area. One member from each ERLLs will be invited to the SB with the mandate to facilitate cross-fertilization and communication between the diverse pilot area with respect to their climatic, environmental, and socioeconomic conditions, and will give recommendations for further actions for consideration to the project consortium. SB members will have the opportunity to attend workshops organized in other Pilot Area ERLLs facing relevant challenges. The SB will be invited to attend the yearly plenary workshops.

Project Partners: Staff members from each Project Partner (PP) who are involved in REACT4MED will have a voice in important project matters. PPs, who would like to address certain issues concerning the project or project management, are able to approach PMB members, or request certain issues to be addressed and put on the agenda at the yearly project meetings for discussion, and where necessary, voting. Possible issues will be reported in the periodic project reports that are sent to the PRIMA-IS.

5 Risk Management Table

REACT4MED risks are registered within the risk management table register presented below, which will be available in the REACT4MED internal platform and updated at least at the end of each reporting period by all partners. The table contains three different sections: Section 5.1 is dedicated to the foreseen risks i.e., those risks, which have been identified at the proposal stage. Section 5.2 lists the unforeseen risks, which have been identified since the beginning of the project. Section 5.3 presents the risk mitigating measures that have been taken during the project.

5.1 Foreseen risks

Risk Number	Description of risk	WPs	Proposed risk-mitigation measures
R1	Competence risks: personnel involved or recruited not able to fulfil tasks	All	Continuous monitoring by the WP Leaders and the PMB and implementing adjustments within each organisation if necessary.
R2	Communication between partners and multi-stakeholder interaction is affected by the COVID-19 crisis (physical meetings)	All	An appropriate number of the most important meetings at the demo site level will be organized following all official measures. All partners are highly experienced with video conference meetings. A Dedicated professional online platform will be used for virtual meetings and a specific plan for online communication will be developed.
R3	Accessing data for the demo sites may prove to be a challenge if data collection does not back far enough, if there are data gaps or if data collection was otherwise incomplete	2, 3, 4, 5, 6	Partners are familiar with relevant sources of data for use at European, Mediterranean, national, and local levels.
R4	Limited response from the stakeholders	3, 4, 5, 6	A robust strategy of engagement with stakeholders will be developed at the beginning of the project. Pilot Area Leaders are already part of the consortium and REACT4MED will build on their strong connection with local stakeholders. The engagement process envisaging face-to-face meetings require interviewers to reach local actors and the experience of the project team already minimizes this risk.
R5	Lack of coordination for model integration	3, 4, 5	A continued communication and feedback between the coordinator and the consortium partners
R6	Operational risks: information and data not shared effectively within the consortium	All	The close cooperation of the responsible persons will minimise this risk. Online meetings will be held at short intervals to monitor progress and identify blocking issues as soon as possible.
R7	ICT (modelling and development risks): increasing gap along the project lifetime between LanDS features and end-user expectations	4	The high number and frequency of milestones and deliverables planned in WP4 will mitigate this problem or lead to the early detection and suitable corrective actions.
R8	Time/budget risks: delays in producing expected deliverables	All	The high frequency meetings of the PMB allow identifying delays, assessing impacts, and implementing organisations/budget changes
R9	Impact risks: the proposed solutions do not meet stakeholder requirements	3, 4, 5, 6	The involvement of all stakeholders from the very beginning will mitigate this risk with dedicated WPs (2, 4, 5).

R10	Dissemination outputs fail to reach the intended audiences due to technical difficulties and COVID-19 crisis.	7	While most researchers and stakeholders are now familiar with distancing limitations and the new dissemination channels are already in place to overcome them, REACT4MED will produce a resilient dissemination strategy that will allow enough flexibility to use alternative channels should outputs fail to reach target audiences

5.2 Unforeseen risks

Risk Number	Description of risk	WPs	Proposed risk-mitigation measures
R11	One of the Pilot Area Partners is reluctant to sign the Grant Agreement for internal reasons	All	The partner is replaced, ideally with a partner that cooperate with the original partner's PI and ideally without changing the Pilot Area.
R12	Delayed in the completion of Milestones/Deliverables	All	Request for extension of the Deliverables submission time. If required, request an extension of the project duration.
R13	One of the Projects Partners is not able to deliver and/or to consume the allocated budget	All	The deliverables/budget at stake are reallocated to other partners

5.3 State of play for Risk Mitigation

Risk Number	Period	Were risk mitigation measures applied?	Did the risk materialise?	Comments
R11	**1**	N/A	Y	Partner 11 (NRC) decided it was not possible to sign the GA due to internal reasons. After negotiations with the PI of NRC and PRIMA, the partner was replaced by PBS (Participatory Development Solutions)
R12	**2**	N/A	Y	Due to various local delays, including the adversities taking place in Israel, the implementation of the 3rd ecosystem restoration living lab (ERLL) workshop was only recently concluded across all Pilot Areas. This workshop delivers content for D3.3 which can only be finalised in M36. This content is crucial to the preparation of D3.4 as well as the 4th ERLL workshops. In the 4th and final workshops, all information from the project will be prepared to be conveyed to the stakeholders as a capacity building event. Furthermore, we believe that the impact of the Project will benefit from additional time after the delivery of D3.3, D3.4, D6.3, and D6.4 to successfully disseminate their results as widely as possible.
R13	**2**	N/A	Y	Partner 8 (INRA), while achieving the foreseen work progress through own funds, was severely underspending due to internal reasons. At the same time due to the granted project extension, additional workload has occurred to partners, but also additional opportunities to disseminate REACT4MED results. Budget was reallocated to the partners who could perform additional activities.