PRIMA SECTION 2

D.8.1 / QUALITY ASSURANCE PLAN

(WP8 Project administrative, legal and financial management)

SUSTEMICROP PROJECT

Development of eco-sustainable systemic technologies and strategies in Mediterranean crop systems contributing to small farming socio-economic resilience

Coordinator:

UNIVERSITY OF LEON (ULE)

Project details and Deliverable information

✓ **Project Details**

Project Title	Development of eco-sustainable systemic technologies and strategies in key Mediterranean crop systems, contributing to small farming socio-economic resilience.
Project Type	Research and Innovation Actions (RIA). Topic 2.2.1. Up-scaling field practices based on agroecology principles to increase ecosystem services and biodiversity, to adapt the small farming systems to climate change and to increase farmers' incomes
Call	PRIMA CALL SECTION 2 2021 – MULTI-TOPIC
Acronym	SUSTEMICROP
Duration	36 months
Project Start Date	01/07/2022

✓ **Deliverable information**

Deliverable	8.1
Status: F: final; D: draft; RD: revised draft	F (26/09/22)
Planned delivery date	30/09/22 (M3)
Actual delivery date	26/09/22 (M3)
Dissemination level: PU = Public, fully open, e.g. web; CO = Confidential, restricted under conditions set out in Model Grant Agreement; CI = Classified, information as referred to in Commission Decision 2001/844/EC.	PU
Type: R: Document, report (excluding the periodic and final reports); DEM: Demonstrator, pilot, prototype, plan designs; DEC: Websites, patents filing, press & media actions, videos, etc.; OTHER: Software, technical diagram, etc.	Report (R)

Document history and quality check review

✓ **Document History**

Version	Date	Implemented by	Description
1.0	02/09/2022	Juan José Rubio Coque / Rebeca Cobos (ULE)	Structure of the document and first contents
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4.0	18/09/2022	Irene Solé, Violeta Martín (ARTICA+i); JJRCoque (ULE)	Minor corrections and refinement
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Final	26/09/2022	Juan José Rubio Coque / Irene Solé (ARTICA)	Final format check and submission

✓ **Quality Check Review**

Reviewer (s)	Main Changes
ARTICA+i	Overall review of the document
Daniel Alonso (ULE)	Overall review of the document and quality check

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List of abbreviations and definitions

Abbreviation	Definition
D	Deliverable
DoA	Description of Action
EC	European Commission
GA	General Assembly
KoM	Kick-Off meeting
M	Month
PC	Project Coordinator
PCB	Project Coordination Board
QA	Quality Assurance
QC	Quality Checker
SC	Scientific Coordinator
SCR	Shared Cloud Repository
SFP	SUSTEMICROP Full Proposal
SIF	Sustainable Innovation Framework
StC	Steering Committee
TCS	Technological Case of Study
TRSd	Technological, Regulatory and Stakeholders database
WP	Work Package
WPL	Work Package Leader

Statement for open documents & Copyrights

1.- Executive summary

The aim of the Quality Assurance Plan is to define a set of procedures and rules that shall allow the produced deliverables and/or documents to correctly communicate, explain and detail the activities performed and results reached within the project, satisfying the relevant quality standards.

The implementation of a quality process will support the SUSTEMICROP consortium in the monitoring of the activities, the identification of new potential risks, the implementation of contingency plan and the timely communication of an eventual change to PRIMA.

All project participants will be involved in the quality assurance process.

The information provided in this deliverable is complementary to the rules and guidelines previously defined in the SUSTEMICROP Consortium Agreement, previously signed by all the partners.

2.- Introduction

The implementation of quality assurance procedures is part of the SUSTEMICROP Task 8.1 (Project administrative, legal and financial management). The quality assurance procedures should focus on monitoring activities built into the work programme to ensure that all project outcomes are compliant with the expected quality standards. This activity will be performed during all the project duration as Task 8.1, with the support of all beneficiaries to guarantee the correct implementation of the procedures here defined. The Quality Plan of SUSTEMICROP Project is a document to optimize project management, to stablish a quality control and also risk management in all those administrative, legal and financial aspects.

Quality plan will be structured in the next sections:

+ A section describing Project Organization in which the overall organization of the project will be described regarding Management structures (roles and responsibilities). This section will explain the management structures their roles, responsibilities, composition, and coordination procedures among structures. Also in this section we will stablish he types of meetings to carry out during the project (general assembly, steering committee, WP/task meetings, etc.). Finally this section will also be dealing with the explanation about the decision-making process and the quorum needed to take a decision. In case of conflict, describe the resolution process, and the documentation that govern the consortium and the project.

+ A section dealing with Project Reporting where the general guidelines will be defined (logos, templates, type of document, confidentiality, etc.). In this section we will review the different Deliverables and milestones of the project and their due times and verification means. Furthermore, expected quality of the deliverables should be included, as well as a statement about the deliverables being in coherence with the goals of the project. Also a brief description of financial aspects will be addressed in this section describing the pre-financing, interim and final payments, when they are expected and the documents that govern those payments (grant agreement, consortium agreement).

+ A section dealing with the Communication Procedures where the communication tools to be used during the project as well as the contact list will be addressed.

+ Next section will be focused in **Risk Management** strategies describing procedures to prevent, mitigate and define an action plan to follow in case of different risks should be implemented.

+ Finally, the last section will describe the **Key Performance Indicators** of the project, how and when they are going to be evaluated. Quantified as much as possible the indicators (i.e. number of stakeholders involved, cost reduction, web visitors, etc) and describe what are the optimal values.

3.- Project organization

3.1.- Overall organization of the project

SUSTEMICROP's work plan is organized in a way that allows to broaden knowledge through advanced research activities throughout its tasks, but with a clear vocation to generate tangible results and outputs in the field of agroecology innovations that can be easily implemented by Mediterranean farmers, who are facing serious problems with climate change and global competitiveness.

In this sense, the package structure is organized by technical thematic areas, which are connected on the one hand by the Project's baseline definition, and on the other with the sustainability assessment (economic, social and environmental) of the agroecological innovations, as well as by the acceptance of the end users.

SUSTEMICROP is organized around the next WPs:

+ WP1 (Lead ULE): Project baseline and sustainable innovation framework design

+ WP2 (Lead ULE): Valorization of crop residues by developing biofertilizers (BFs) based on BCA and PGPR-enriched compost

+ WP3 (Lead INRGREF): Novel biopesticides against key diseases based on essential oil from aromatic plants and bacterial priming molecules

+ WP4 (Lead INRAE): Evaluation of new grapevine varieties as agroecological innovations addressing CC adverse effects for sustainable viticulture

+ WP5 (Lead HORTA): Agroecology innovations three-pillar sustainability assessment through novel digital tools

+ WP6 (Lead UMP): Evaluation and acceptance of agroecological innovations for improving farmer uptaken thought interactive multi-actor activities

+ WP7 (Lead INRGREF): Communication and Dissemination

+ WP8 (Lead Ule): Project Management

WPs are intimately interconnected in the generation of data and outputs, as well as the achievement of global results and milestones, allowing the correct progress of the project and the achievement of the objectives set. Additionally, some WPs promote the generation of information that can determine the progress in one direction or another of other WPs (such as diagnostic in WP1, activation of acceptance in WP6, or connectivity activities with other projects, networks or relevant stakeholders in WP7, being the communication and dissemination target user oriented. In addition, the project has a significant number of Partners and countries, which makes good governance and organization essential through a management WP8, as it is resumed in the **Work Plan Chart** shown below **(Figure 1)** and SUSTEMICROP Gantt Chart (**Figure 2**).

Figure 1.- SUSTEMICROP Work Plan Chart

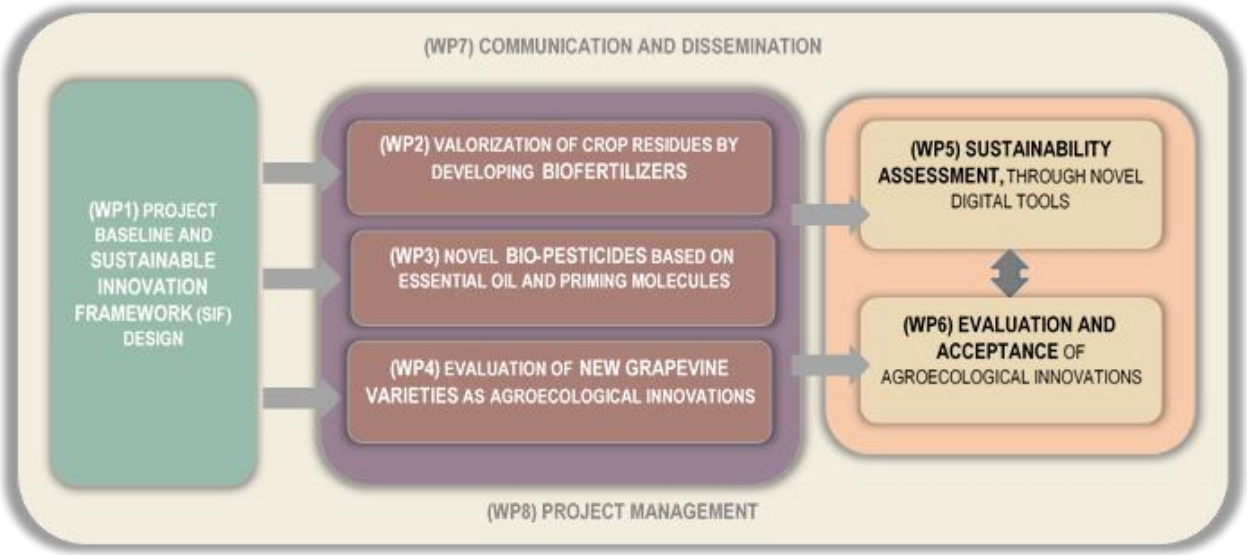
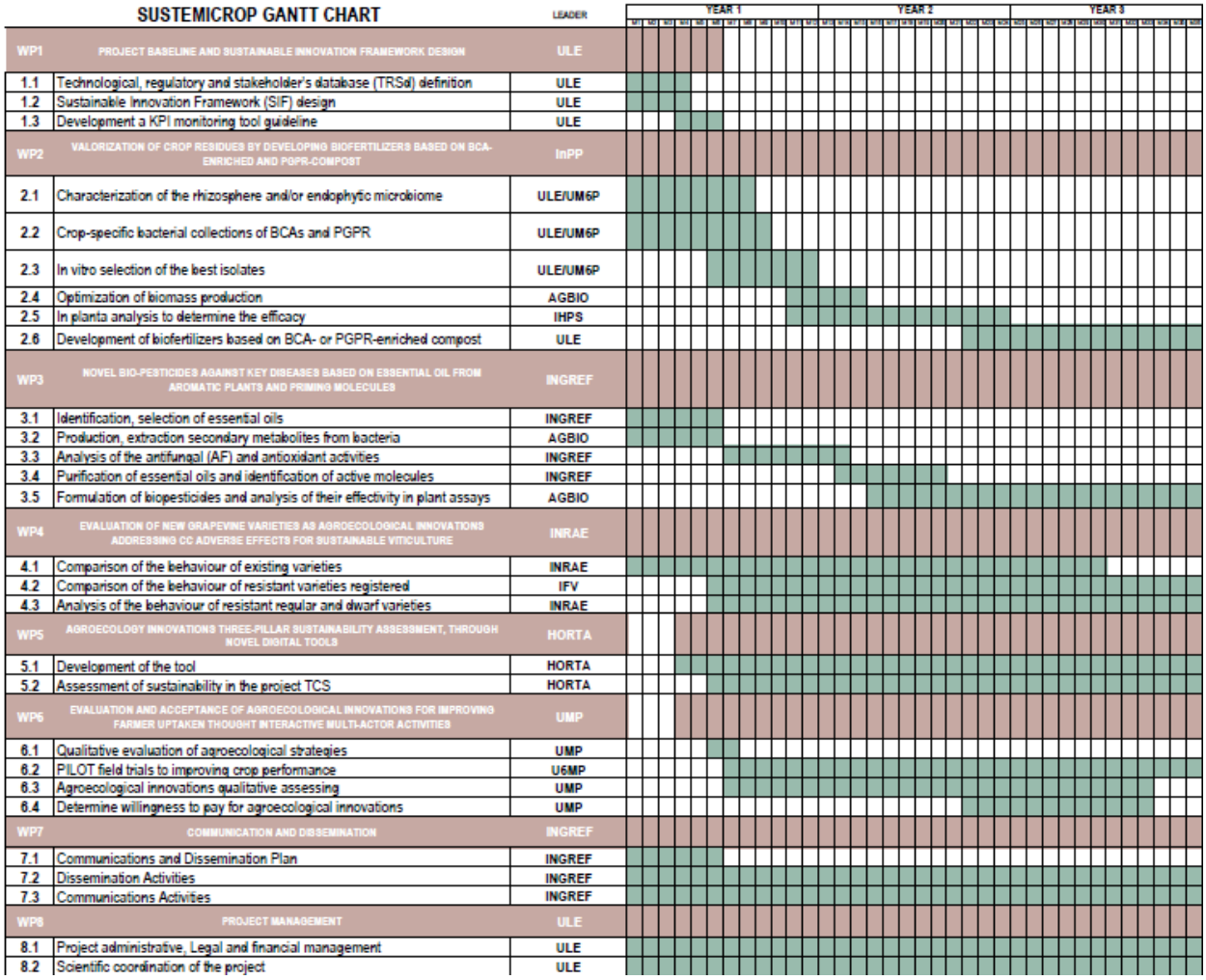


Figure 2.- SUSTEMICROP Gantt Chart



SUSTEMICROP GANTT CHART		LEADER	YEAR 1	YEAR 2	YEAR 3
WP1	PROJECT BASELINE AND SUSTAINABLE INNOVATION FRAMEWORK DESIGN	ULE			
1.1	Technological, regulatory and stakeholder's database (TRSd) definition	ULE			
1.2	Sustainable Innovation Framework (SIF) design	ULE			
1.3	Development a KPI monitoring tool guideline	ULE			
WP2	VALORIZATION OF CROP RESIDUES BY DEVELOPING BIOFERTILIZERS BASED ON BCA-ENRICHED AND PGPR-COMPOST	InPP			
2.1	Characterization of the rhizosphere and/or endophytic microbiome	ULE/UM6P			
2.2	Crop-specific bacterial collections of BCAs and PGPR	ULE/UM6P			
2.3	In vitro selection of the best isolates	ULE/UM6P			
2.4	Optimization of biomass production	AGBIO			
2.5	In planta analysis to determine the efficacy	IHPS			
2.6	Development of biofertilizers based on BCA- or PGPR-enriched compost	ULE			
WP3	NOVEL BIO-PESTICIDES AGAINST KEY DISEASES BASED ON ESSENTIAL OIL FROM AROMATIC PLANTS AND PRIMING MOLECULES	INGREF			
3.1	Identification, selection of essential oils	INGREF			
3.2	Production, extraction secondary metabolites from bacteria	AGBIO			
3.3	Analysis of the antifungal (AF) and antioxidant activities	INGREF			
3.4	Purification of essential oils and identification of active molecules	INGREF			
3.5	Formulation of biopesticides and analysis of their effectivity in plant assays	AGBIO			
WP4	EVALUATION OF NEW GRAPEVINE VARIETIES AS AGROECOLOGICAL INNOVATIONS ADDRESSING CC ADVERSE EFFECTS FOR SUSTAINABLE VITICULTURE	INRAE			
4.1	Comparison of the behaviour of existing varieties	INRAE			
4.2	Comparison of the behaviour of resistant varieties registered	IFV			
4.3	Analysis of the behaviour of resistant regular and dwarf varieties	INRAE			
WP5	AGROECOLOGY INNOVATIONS THREE-PILLAR SUSTAINABILITY ASSESSMENT, THROUGH NOVEL DIGITAL TOOLS	HORTA			
5.1	Development of the tool	HORTA			
5.2	Assessment of sustainability in the project TCS	HORTA			
WP6	EVALUATION AND ACCEPTANCE OF AGROECOLOGICAL INNOVATIONS FOR IMPROVING FARMER UPTAKEN THOUGHT INTERACTIVE MULTI-ACTOR ACTIVITIES	UMP			
6.1	Qualitative evaluation of agroecological strategies	UMP			
6.2	PILOT field trials to improving crop performance	U6MP			
6.3	Agroecological innovations qualitative assessing	UMP			
6.4	Determine willingness to pay for agroecological innovations	UMP			
WP7	COMMUNICATION AND DISSEMINATION	INGREF			
7.1	Communications and Dissemination Plan	INGREF			
7.2	Dissemination Activities	INGREF			
7.3	Communications Activities	INGREF			
WP8	PROJECT MANAGEMENT	ULE			
8.1	Project administrative, Legal and financial management	ULE			
8.2	Scientific coordination of the project	ULE			

3.2.- Management structures: roles and responsibilities

The implementation of quality assurance procedures will count on the support of all beneficiaries involved in the project. The different roles identified in the management structure will take part in the SUSTEMICROP's quality process. Each individual member of the project is directly responsible for:

- the quality of the work performed for the tasks under his/her responsibility,
- the identification and implementation of preventive and corrective actions (if needed),
- the identification of necessary improvements to the achieved results to meet the project initially expected results. The following sections describe the different roles and responsibilities specifically linked to the quality assurance process.

3.2.1.- Project Coordinator (PC)

PC responsible for the coordination of the administrative, legal and financial management aspects of the project and to supervise the monitoring of the evolution of the work plan execution. These tasks will be performed by Juan José Rubio Coque (ULE).

The responsibilities of the Project Coordinator (PC), in relation to the quality, are:

• to prepare the Quality Assurance Plan

• to oversees the application of quality assurance process to deliverables

• to carry out a final quality check of the format for each deliverable: i.e. correct filling of deliverable information, use of correct template and layout, etc.

• to monitor and keep updated the risks table

• to upload the final version (in pdf) of the deliverables into the Monitoring, Evaluation and Learning (MEL) Platform

3.2.2.- Scientific Coordinator (SC)

SC will be responsible to supervise the technical and scientific progress of the project. SC will also be involved in the review of technical deliverables as advisor, in the evaluation of the achieved results and of any relevant issue that might arise.

In particular, the SC will:

• to provide feedback directly to the WP leader in case the deliverable is not as expected in the DoA. WP leader will take the necessary actions to correct this issue

• to ensure the overall coherence and complete coverage of topics related to the field in the project

Therefore, the SC shall indicate possible suggestions/comments to improve the technical deliverables in case they do not reflect the expected aim.

These tasks will be performed by the PC [Juan José Rubio Coque (ULE)].

3.2.3.- Work Package Leaders (WPL)

Each WP leader is responsible for the Quality Assurance (QA) within the respective lead WP and may delegate quality procedures to Task Leaders when appropriate. The tasks of the WP Leaders regarding quality issues are:

• to define contributing partners to specific deliverable

• to organise meetings/conferences when necessary for the organisation of activities of the WP

• to update deliverable status table, to be communicated (in the progress reports or when specifically requested) to the Project Coordinator

• to identify risks and update the risks table, to be communicated (in the progress reports or when specifically requested) to the Project Coordinator

• to define intermediate steps for delivery of documents

• to provide visibility on activity progress

• to define and update the structure of the folders in the internal management portal related to the WP to facilitate the exchange of information.

The management at WP level will be carried out according the Consortium Communication Plan summarized in the **Table 1** below.

Table 1.- Consortium Communication Plan

WHO	TO WHO	WHAT	HOW	WHEN
Coordinator	Partners	Information exchanged with the PRIMA SECRETARIAT	e-mail	Whenever received it
Coordinator	Partners	Reports, working documents, relevant communications	Shared cloud repository (SCR)	Continuously
Participant	WP Leaders	Information about results and progress of tasks	e-mail, meetings, SCR	Monthly or when requested
WP Leader	Participants	Review of activities and progress towards achievement	Face-to-face, Conference call	Quarterly or when needed
WP Leader	Steering Committee	Detailed progress of WP, successes, and shortcomings	Conference call, SCR	biannual Project meetings
Steering Committee	Partners	Results obtained in the different WPs, next steps to follow and additional requests	Face-to-face, SCR, email	Annual Project meetings
Partners	Coordinator	Any concern or problem at both scientific or financial	e-mail, phone	When needed

Briefly, partners will be asked (by WP Leader and/or Coordinator) to deliver periodical reports of their activities every 6 months, additionally to each National reporting and PRIMA reports requested. These will contain scientific progress and resource allocation information and will be considered as project internal working material, uploaded and available on the Consortium shared cloud repository (SCR) (i.e. shared Dropbox folders).

As indicated in **Table 1** Communication with PRIMA Secretariat will be carried out by the PC with the assistance of ARTICA+I Consulting. Communication activities will be developed whenever there is a request for communication from PRIMA secretariat and, in any case, whenever the release of any deliverable through the MEL platform is necessary, according the indicated in **Table 2**.

The following boards will be established to help in management activities: a Project Coordination Board and a Steering Committee whose composition and tasks will be described next.

3.2.4.- Project Coordination Board

The **Project Coordination Board (PCB)** will encompass one representative of each partner and will organise online or face-to-face meetings (depending on the context and partners' availability) at least every 12 months and whenever needed to solve a conflict. The scientific and administrative, legal and financial tasks of the PCB have already defined in the Consortium Agreement (Article 4. Project Management).

The composition of the PCB is:

+ Juan José Rubio Coque (ULE)
+ Cédric Moisy (IFV)
+ Patrice This (INRAE)
+ Sebastjan Radisek (IHPS)
+ Lamia Hamrouni Bel Hadj Brahim (INRGREF)
+ Maryam Rafiqi (UM6P)
+ Alfredo Vera (AGBIO)
+ Valentina Manstretta (HORTA)

+ Mohammed Aziz Elhoumaizi (UMP)
+ Lamis Chalak (LU)

3.2.5.- Steering Committee

The **Steering Committee (StC)** involving the Project Leader and the WP Leaders (If necessary, other tasks leaders will be invited) will be responsible for the scientific, technical and technological implementation and follow-up of the project, including the control of the achievement of scientific objectives and milestones, the assessment of any scientific deviations, and the application of corrective measures. The SC will organize online meetings whenever needed to solve a conflict and minimum every 6 months. Their tasks have been previously described in the Consortium Agreement (Article 4. Project Management).

3.3.- Meetings

In-depth monitoring activities will be done during the project meetings:

+ **General project meetings** will be developed at project start (Kick-off meeting), around month 18, and at the end of the project (month 36) with the participation of representatives of all the partners.

+ **WP meetings for scientific coordination** should be carried out every 4 months. They will involve all the partners participating in a specific WP.

+ **Periodic coordination meetings with the Steering Committee** (every 6 months) with participation of Project Leader and the WP Leaders.

+ **Project Coordination Board meetings** (at least every 12 months and whenever needed to solve a conflict) with the participation of all the members listed above.

3.4.- Decision making and conflict resolution process

The partners have agreed within the Consortium Agreement (Article 6. Responsibilities of parties) to attempt solving amicably their conflicts, either on technical, financial or procedural issues.

Both Scientific Coordinator and Management Team should immediately be informed about conflicts and should help in the conflict resolution as necessary and as long as such dispute does not involve the Coordinator.

If possible, disputes should be dealt at the lowest decision-making body level.

If necessary, a meeting will be held with all representatives of the respective level. In case of failure, a meeting at upper level will be arranged. PC will act as mediator in case of conflict.

In the unfortunate case that the dispute cannot be solved amicably, provisions agreed within the Consortium Agreement (Article 15. Governing law, competent court and settlement of disputes) will be put in place.

4.- Project reporting

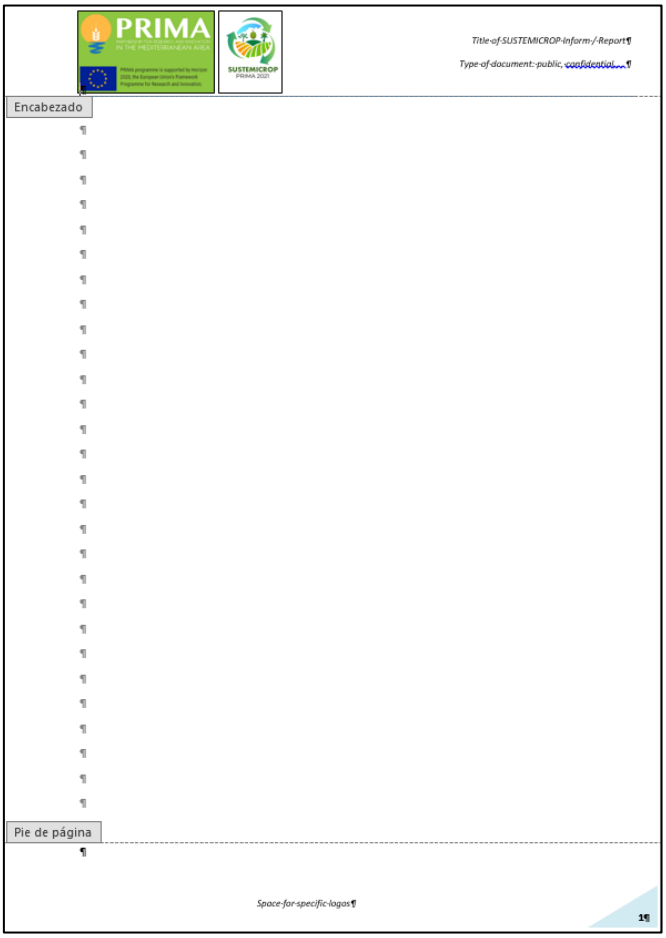
4.1.- General guidelines

All the reports and informs generated throughout the project will be done in a model/template word document **(Figure 3)** that will include in the header the PRIMA logo, the EU logo and the SUSTEMICROP logo (available at the SCR: DropBox in the 0_TEMPLATES AND REPORTING folder). Also in the header a general title of the report/inform and the type of document regarding its public/confidentiality character will be included.

In the case of partial, or partner-specific reports, the logos required by the corresponding national agencies should be included in the footer, with the corresponding page numbering (sample/template is shown and will be available in the DropBox in the 0_TEMPLATES AND REPORTING folder).

In order to standardize the format of the reports, they will be prepared in Calibri font (size 11 for the general text and size 12-13-14 for the different headings of sections and subsections).

Figure 3.- Model / Template for the preparation of all reports, informs and deliverables released along the project



4.2.- Technical reporting

4.2.1.- Deliverables and milestones

A list of the deliverables that should be produced and released along the SUSTEMICROP project are indicated next (**Table 2**. Deliverable list), including the delivery timing:

Table 2.- Deliverable list

#	Deliverable name	WP	Lead particip.	Type	Diss.	Delivery
D.1.1	Technological, Regulatory and Stakeholders database (TRSd)	**1**	ULE	R	CO	M4
D.1.2	SIF description and guidelines	**1**	ULE	R	PU	M6
D.2.1	Comparative analysis of the rhizosphere and/or endosphere microbial composition from healthy and diseased plants of the different crops	**2**	ULE, IHPS, UP6M	R	PU	M12
D.2.2	Collection of crop specific bacterial isolates from the rhizosphere and/or endosphere of the different crops	**2**	ULE, IHPS, UP6M	DEM	CO	M6

D.2.3	A selection of 6 bacterial isolates based on their AF activity against selected fungal pathogens and/or plant growth promoting traits	**2**	ULE, IHPS, UP6M	DEM	CO	M14
D.2.4	A fact sheet with general data of conditions for the growth of the 6 selected isolates to be used by AGBIO to optimize biomass production	**2**	ULE, IHPS, UM6P	R	CO	M12
D.2.5	Report on the effectiveness of the 4 selected BCAs to control fungal pathologies and of 2 PGPRs to valorize hop after plant assays	**2**	ULE, IHPS, UM6P	DEM	CO	M24
D.2.6	Efficacy of BCA-enriched compost and PGPR-enriched compost in pot and/or small-scale field trials	**2**	ULE, IHPS, UM6P	DEM	CO	M36
D.3.1	Detailed list of selected species to be extracted	**3**	INRGREF	R	CO	M9
D.3.2	Report on the chemical composition of natural extracts from selected aromatic plants	**3**	INRGREF	R	CO	M9
D.3.3	Optimized protocol of the biological activity (dose and methodology of use) and antifungal and antioxidant capacity for biocontrol of phytopathogenic fungi on vitro tests	**3**	IFV	R	CO	M24
D.3.4	Report on molecules of the secondary metabolism of bacteria produced at an industrial level	**3**	AGBIO	R	CO	M25
D.3.5	Report with the effectiveness results of the plant assays with the new biopesticides formulations	**3**	AGBIO	R	CO	M36
D.4.1	Data on the behaviour of the different varieties tested in more extreme conditions.	4	INRAE	R	PU	M36
D.4.2	Identification of the best regular varieties adapted to climate change	4	INRAE	OTHER	PU	M36
D.4.3	Identification of the best registered resistant varieties (among 4 compared varieties) adapted to CC and CO in Med conditions	4	IFV	OTHER	PU	M36
D.4.4	Identification of the best new resistant varieties (among 10 tested varieties) adapted to CC and CO in Mediterranean conditions	4	INRAE	OTHER	PU	M36
D.4.5	Identification of putative parents for future crosses	4	INRAE	OTHER	PU	M36
D.4.6	Better understanding of the effect of environment on different traits (fruits and vine) and designation of the best targets for breeding	4	INRAE	R	PU	M36
D.5.1	Report on the online tool developed	5	HORTA	R	CO	M36
D.5.2	Open access database with TCS assessment data.	5	HORTA	R	PU	M36
D.5.3	Report on the sustainability evaluation in the TCS	5	HORTA	R	CO	M36
D.6.1	PILOT Field trials design based on quality assess. with stakeholders	6	UMP, UM6P	R	CO	M8
D.6.2	Yearly reports on PILOT Field trials results	6	UMP, UM6P	R	CO	M24, 36
D.6.3	Guidelines on novel integrated crop management using agroecological innovations and replicability studies for their use in other crops, regions, or country, in the three target crops	6	UMP, UM6P	R	CO	M36
D.6.4	Report on acceptance by farmers to adopt agroecological innovations solutions and roadmap for policy making	6	UMP, UM6P	R	PU	M36
D.7.1	Communications and Dissemination guidelines, visual identity, internal communication manual	7	INRGREF	R	CO	M3
D.7.2	Communications and Dissemination Plan, including Calendar, Newsletter, Monitoring Tool	7	INRGREF	R	CO	M6
D.7.3	Project website, Newsletter, press clipping and Social media impact	7	INRGREF	R	PU	M36

D.7.4	SUSTEMICROP events and conferences attendance	7	INRGREF	R	PU	M36
D.8.1	Quality Plan	8	ULE	R	PU	M3
D.8.2	Minutes of the project management boards	8	ULE	R	CO	M36
D.8.3	Regular project reporting	8	ULE	R	CO	M18, 36
D.8.4	IPR Management plan	8	ULE	R	PU	M12

DELIVERABLES NOTE: Type: R: Document, report (excluding the periodic and final reports); DEM: Demonstrator, pilot, prototype, plan designs; DEC: Websites, patents filing, press & media actions, videos, etc.; OTHER: Software, technical diagram, etc. **Dissemination level:** PU = Public, fully open, e.g. web; CO = Confidential, restricted under conditions set out in Model Grant Agreement; CI = Classified, information as referred to in Commission Decision 2001/844/EC.

4.2.2.- Deliverable responsible

The value and amount of the work carried out in the task is represented in the deliverable. Deliverables should reflect the work done in the related task; therefore, they must provide a clear picture of the activities fulfilled and results achieved towards the objectives of the project.

The partner responsible of each deliverable has been previously identified in the SUSTEMICROP Full Proposal (SFP) document; however, the specific name of the person in charge of the deliverable preparation will be defined in the quality review process.

The tasks of the responsible partner(s) for a deliverable regarding quality issues are:

- to define the structure of the document
- to collect information from contributing partners
- to create a single master document that is properly structured and have a natural flow and consistency. Deliverables should not be just a collection of contributions but a single coherent document providing credible proofs for all the claims made in the document
- to keep updated the master file and manage the organisation of the information
- to update WP leader about progress of activities
- to identify risks and update the risk table related to the specific task/deliverable (in the internal progress reports or when specifically requested)
- to provide the deliverable in time to allow the internal quality process assurance

Each version of the deliverables should be shared in the SCR (Dropbox platform) and the files should be identified/named as indicated in the Deliverables List (see above).

Changes and/or corrections made the involved partners in the different versions must be done in track-changes modality.

Final version of the deliverable (in word and pdf format) must be saved in the SCR and a communication should be sent to the PC to proceed with the submission to PRIMA, at least 48 hours before deadline.

The final responsibility for the quality of a deliverable belongs to the partner responsible for the activity (WP Leader and Task Leader).

4.2.3.- Internal Quality checker

At least one internal Quality Checker (QC) shall review each deliverable. QCs shall not be authors or co-authors of the deliverable to be reviewed.

QCs are invited to give detailed and constructive comments (with references, whenever possible) that will help the authors to improve the deliverable.

It will be the responsibility of the QCs to indicate whether the report is too large for the purpose (and the work included).

4.2.4.- SUSTEMICROP quality assurance process

The quality assurance process defines the procedures, schedule, quality reviews and reporting activities to be implemented for each deliverable identified in the SFP.

For data protection reasons, this deliverable being public, the names of deliverables responsible as well as the names of the QCs, will be available just for the consortium in the internal project management area (SCR), with restricted access only for partners.

4.2.5.- Quality control path and timeline

The quality control path designed for SUSTEMICROP is shown in the following figure. This process might be fine-tuned as the implementation of the project progresses. Changes to the process will be communicated to the partners by email and the new process together with the diagram illustrating the updated process will be upload to the internal management portal.

The quality assurance process will involve the following roles (see **Figure 4**):

1. Deliverable responsible (editors): the partner(s)/person(s) responsible for the deliverable will provide a document that will be quality checked by him/her with respect to contents, format, grammar, orthography and style.

2. Deliverable contributors: the partner(s)/person(s) contributing to the deliverable. They will provide a complete and concise input that is quality checked by him/her with respect to contents, format, grammar, orthography, and style, complying to the structure of the deliverable to which they contribute.

3. WP leader (WPL): when the WPL is a different partner/person from the deliverable responsible, he/she read all inputs and verifies that the contents are in line with the expected results and tasks listed in the SFP.

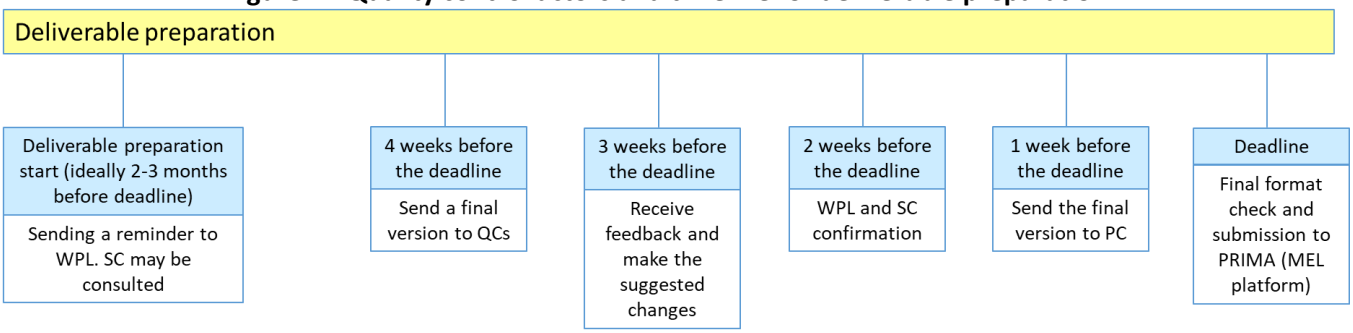
4. Scientific Coordinator: after release by the WPL, the SC may check the deliverable too. The WPL can consult with the SC in case of lacking quality.

5. Project Coordinator: will check the deliverable once it will be ready for submission. The deliverable responsible should send the final version in .docx and .pdf to the Project Coordinator.

6. Internal QCs: QCs expect to receive deliverables when they will be ready to be submitted to PRIMA. QC oversee formatting issues and will double check complete coverage of topics related to the tasks. QCs might also be involved in the structuring of a deliverable as advisors. QCs evaluate the achieved results and any relevant issue that might need to be documented in the deliverable.

Therefore, the QCs are expected to provide feedback about the clarity and structure of the information provided in the deliverable and on the content.

Figure 4.- Quality control actors and timeline for deliverable preparation



4.2.6- Methods to be used for the quality control

The following recommendations will be shared with each person involved in the quality control:

• when working with Word documents, QCs' comments and contributions should be done using the "Track Changes" mode combined with specific text comments. Collaborative online edition may be available for specific deliverables which require input from multiple partners. In any case, all deliverables to be sent to the QCs should be in an editable format.

• In the case where, by unexpected reasons, the QC is not able to meet the deadline, the deliverable leader should be informed as soon as possible to be able to replace the QCs.

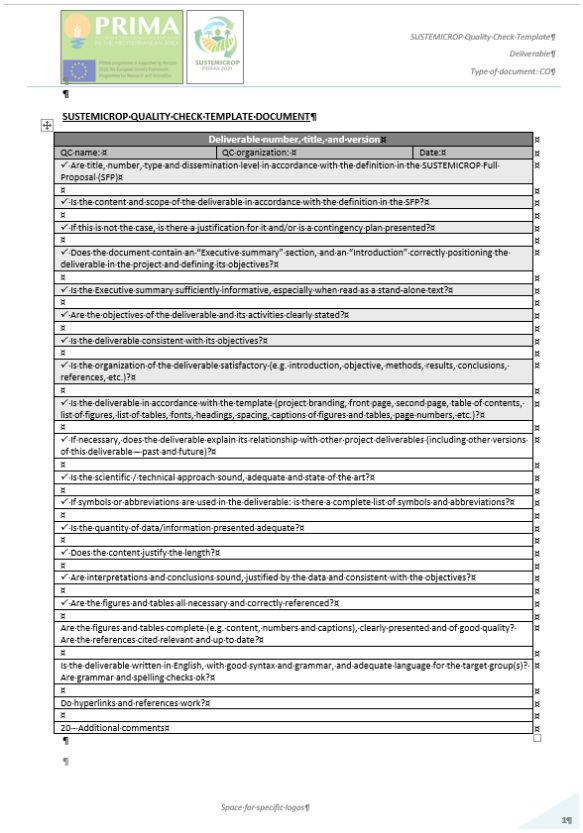
4.2.7- Quality check template

The QCs involved in the quality check should complete a "QC form" providing information about the check performed to keep track of the QC process and be able to implement, when requested, improvements/changes.

Additional comments can be included in the deliverable text to indicate proposed changes.

The SUSTEMICROP deliverable QC form, detailed in **Figure 5** will also be part of the deliverables template and will be removed after the QC process is completed and before the submission to the PRIMA and MEL Platform. It will be available at the SCR (DropBox in the 0_TEMPLATES AND REPORTING folder).

Figure 5.- Model / Template to be used in the Quality Check proccess



SUSTEMICROP-QUALITY-CHECK-TEMPLATE-DOCUMENT

Deliverable number, title, and version
QC name:	QC organization:	Date:
✓ Are title, number, type and dissemination level in accordance with the definition in the SUSTEMICROP Full Proposal (SFP)?
✓ Is the content and scope of the deliverable in accordance with the definition in the SFP?
✓ If this is not the case, is there a justification for it and/or is a contingency plan presented?
✓ Does the document contain an "Executive summary" section, and an "Introduction" correctly positioning the deliverable in the project and defining its objectives?
✓ Is the Executive summary sufficiently informative, especially when read as a stand-alone text?
✓ Are the objectives of the deliverable and its activities clearly stated?
✓ Is the deliverable consistent with its objectives?
✓ Is the organization of the deliverable satisfactory (e.g. introduction, objective, methods, results, conclusions, references, etc.)?
✓ Is the deliverable in accordance with the template (project branding, front page, second page, table of contents, list of figures, list of tables, fonts, headings, spacing, captions of figures and tables, page numbers, etc.)?
✓ If necessary, does the deliverable explain its relationship with other project deliverables (including other versions of this deliverable – past and future)?
✓ Is the scientific / technical approach sound, adequate and state of the art?
✓ If symbols or abbreviations are used in the deliverable: is there a complete list of symbols and abbreviations?
✓ Is the quantity of data/information presented adequate?
✓ Does the content justify the length?
✓ Are interpretations and conclusions sound, justified by the data and consistent with the objectives?
✓ Are the figures and tables all necessary and correctly referenced?
Are the figures and tables complete (e.g. content, numbers and captions), clearly presented and of good quality? Are the references cited relevant and up to date?
Is the deliverable written in English, with good syntax and grammar, and adequate language for the target group(s)? Are grammar and spelling checks ok?
Do hyperlinks and references work?
20.- Additional comments

4.2.8.- Mid-term, interim and final report

Complete mid-term (month 18) and final reports (month 36) are mandatory for PRIMA Secretariat. They are necessary to assess the progress of the project and to ensure the continuity of the project, as well as for the release of the financial assistance.

Those reports will be structured by WPs and they should include a technical description of the works carried out, a comment indicating the general progress of the different tasks and a description of the putative deviations of the general plan described in the full proposal. They should be prepared according the general recommendations previously indicated in the 3.2.2. to 3.2.7 sections of this document for the release of deliverables.

In order to prepare such reports every WP leader will request to every partner involved in a particular WP all the information required regarding all the technical activities developed until that moment to prepare a technical report for each WP. WP leaders will be free to organize those partial reports but it is strongly recommended to follow a description of work following the different tasks included in the full proposal.

These partial WP reports should be sent to the general coordinator by month 17 and 35 so they can be integrated to generate a full report.

4.3.- Financial aspects

All the financial aspects regarding the normal development of the project should be handled by each individual partner in accordance with the specific rules of their respective national agencies.

In any case, each member shall abide by the provisions of the Consortium Agreement (Article 5. Financial Conditions).

5.- Communication procedures

5.1.- Internal communication

All the internal communications would be initially carried out by electronic mail. Videoconferences will be planned when necessary.

5.1.1.- Contact list

The contact list of SUSTEMICROP participants is described next. When necessary new participants will be added to the contact list. Each partner is responsible for update the general contact list when a person of the project change, or to inform about it. Contact list will be reminded/updated in each General Assembly or Steering Committee. More reduced contact lists regarding, for instance, participants in a specific WP should be managed by WPLs.

+ ULE: *Juan José Rubio Coque <jjrubc@unileon.es>, Daniel Alonso Martínez <dalom@unileon.es>, Beatriz Jiménez Parra <beatriz.jimenez@unileon.es>, Laura Cabeza García <laura.cabeza@unileon.es>, Rebeca Cobos <rebeca.cobos@unileon.es>*

+ IFV: *Chantelot Eric <eric.chantelot@vignevin.com>, Moisy Cedric <Cedric.MOISY@vignevin.com>, Loic Lecunff <loic.lecunff@vignevin.com>, Hugo Eirios <Eirios.HUGO@vignevin.com>*

+ INRAE: *Patrice This <patrice.this@inrae.fr>, Dominique This < dominique.this@supagro.fr>, Cécile Marchal < cecile.marchal@inrae.fr>*

+ IHPS: *Sebastjan Radišek <sebastjan.radisek@ihps.si>*

+ INRGREF: *Lamia Hamrouni <hamrounilam@yahoo.fr>*

+ UM6P: *Maryam Rafiqi <Maryam.RAFIQI@um6p.ma>, Krishna Devkota <Krishna.DEVKOTA@um6p.ma>,*

Lamfeddal KOUISNI <Lamfeddal.KOUISNI@um6p.ma>,

+ HORTA*: Valentina Manstretta <v.manstretta@horta-srl.com>*

+ AGBIO: *Esaú Megías <esau@agrogeniabiotech.com>, Alfredo Vera <avanet@agrogeniabiotech.com>*

+ UMP: *Mohammed Aziz <m.elhoumaizi@ump.ac.ma>, Redoaune Benabsbes <red.bes72@gmail.com>*

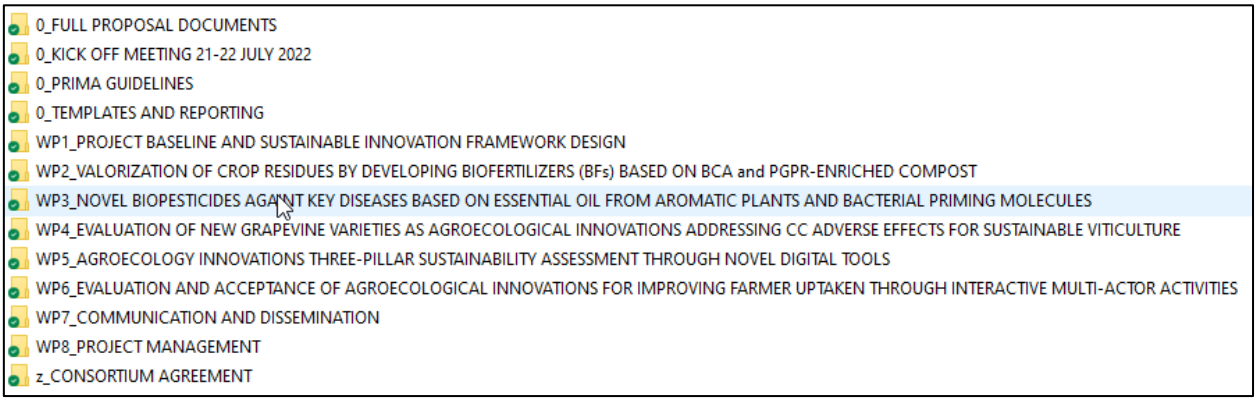
+ LU: *Lamis Chalak <lamis.chalak@ul.edu.lb>*

+ ARTICA+i: *Irene Solé Gil <isole@articai.es>, Violeta Martín < vmartin@articai.es>.*

5.1.2.- Communication tools

In order to optimize the communication between all partners and the access to all information related to the project, a SCR has been created (shared folder of the **Dropbox application)** with the name **SUSTEMICROP_PRIMA** in which different folders and subfolders are included with the following structure (modifiable in a future) (**Figure 6**).

Figure 6.- Structure of the SCR created in the Dropbox application for sharing any information regarding SUSTEMICROP Project



5.2.- External communication

In order to optimize the dissemination of the project results to partners, stakeholders, authorities and the general public, the following tools have been or will be created:

5.2.1.- Website and newsletters

+ Web Page: https://sustemicrop.eu/

+ Blog: https://sustemicrop.eu/blog

5.2.2.- Social media

The dissemination of the project through social networks will be carried out using the following channels:

- Facebook account: https://www.facebook.com/Sustemicrop-100161226132740 (Official Hashtag: #Sustemicrop)
- Instagram account: https://www.instagram.com/sustemicrop/ (Official Hashtag: #Sustemicrop)
- Twiter account: https://twitter.com/sustemicrop/ (Official Hashtag: #Sustemicrop)

6.- Risk management

Next **Table 3** is included indicating some of the identified risks that could interfere the normal development of the project and also some putative proposed risk mitigation measures:

Table 3.- Identified risks that could interfere the normal development of the project and putative proposed risk mitigation measures

Description of risk (indicate level of likelihood: Low/Medium/High)	WP	Proposed risk-mitigation measures
Medium: Not being able to develop a sufficient number of sustainable KPIs that show the impact of the innovative solutions used by the small farmers in the project.	1/5	Several pre-test and post-tests will be carried out and a control group will be used throughout the entire process in order to verify that items and measurement scales proposed are reliable and comprehensive.
Medium: Lack of input data from TCS to design and validated web-based tool	2/3/4	Default data would be used representative to feed the web-based tool. Apart from TCS data, WP6 activities will also generated data supporting tool validation.
Low: not being able to obtain effective BCAs for each of the pathologies under study.	2	Advantage will be taken of the strong synergies between the different partners and their wide knowledge, by making available the most effective BCAs isolated to any partner to test their effectiveness against the pathogen
Low: BFs developed may have a cost considered high by the small farmer.	2	Production of microbial biomass will be optimized to the maximum from cheap nutritional supports (e.g., wastes from other industries).
Low: chemical instability in using plant Essential oils as biopesticides under field conditions, lead to rapid evaporation.	3	Incorporation of EOs into controlled release nanoformulations may contribute to solve problems associated with their application; this kind of formulation is expected to be more effective than the bulk (free) substance
Low: Difficulties to find plots of same age for the comparison of existing cultivars behaviour in several conditions	4	A large list of cultivars will be considered, plus project execution will rely on the plant material from the Vassal collection (more than 3000 cultivars).
Low: Low offspring production. Results of crosses are linked with the parents' identity	4	To avoid low numbers of seedlings, partners will multiply the number of couples and perform as many crosses as possible for each couple.
Medium: Difficulties to validate the Web-based tool, due lack of user acceptance, or for lack of sufficiently robust or good data	5	Responsible partners of the development will create a step-by-step process to implement the newly developed tools, identifying potential problems and looking for corrective measures. Data from the WPs (2, 3, 4, 6) will be stored and correctly classified ensuring robustness to be used in the tool
Medium: Partners not complying with planned targets	8	Advanced planning of actions and deliverables will be in place to detect early any deviation on the planning of any partner. Regular consortium meetings will contribute to closely follow the consortium work performance. Coordinator will take actions to deal with the non-performance if any
Medium: Mobility restrictions due to pandemic SARS-CoV-2	7/8	Most of the work, meetings and conferences can be organized remotely. Events will be broadcasted over the web. Field work is organized in regional/country scale to reduce the impact of possible mobility restrictions.
Low: Low engagement of partners on Communication and Dissemination strategies due to a lack of time, for example	7	Regular updates will be sent to ensure that all partners are aware of upcoming newsletters – A Communications call will be held every 2 months to ensure the project is on track
Low: Low attendance at final conference and/or difficulties to hold the Final Conference on-site	7	Constant communication with relevant stakeholders as well as engaging them from the onset (KOM) will ensure a high project interest and therefore high participation to the final conference. On-line means will be deployed to ensure proper Final conference development
Low: The interest of the consortium and the network is diluted in time (lack of budget, lack of time, new priorities) Partner institutional instabilities, Partner leaving	8	Close coordination and WP8 management throughout the project, attentive monitoring of all indicators, (budget, deliverables, etc.) Additional coordination meeting will be proposed if needed, and reflections with PRIMA Secretariat could be engaged (i.e. tasks redistribution)

In each GA a revision of the identified risk will be carried out and partners will be asked to provide any other identified risk and its corresponding mitigation measure.

7.- Key performance indicators

In the next **Table 4** are listed the key performance indicators of the project, and how they are going to be evaluated.

Table 4.- Key Performance Indicators of SUSTEMICROP Project

KPI No.	DESCRIPTION AND TARGET	MEANS OF VERIFICATION
KPI.1	Stakeholders Network database with at least 50 representatives in all the participant Countries	Technological, Regulatory and Stakeholders database report (D.1.1)
KPI.2	Definition of homogeneous and comparative indicators, on the general sustainable farming context. At least 15 indicators for three pillar (economic, environmental, social) sustainability assessment of the innovations proposed	Sustainable Innovation Framework (SIF) report (D.1.2)
KPI.3	Within the 16 systemic innovation solutions tested in the project, designed case of studies will validate, at least, 5 alternatives (non-chemical) products allowing the reduction of pesticides use (chemical inputs) by 20%. More specifically and consequently: - New BF could allow a medium-term 20% reduction in chemical pesticides, and up to 50% in the long term upon routine usage where its application allows the development of suppressive soils against target pathologies and favouring the nutritional state of the plant - 40% increase in soil biodiversity and health due to the reduction of chemical pesticide and improvement of physico-chemical soil properties - New biopesticides based on essential oils from plant extracts, could allow a reduction of 15% chemical pesticides to control target diseases - New biopesticides based on bacterial priming molecules, might allow a 20% reduction in pesticides to control phytopathogenic fungi. - Reduction of 85% pesticides inputs by using grapevine resistant varieties. The new resistant varieties demonstrated a reduction in pesticides of between 87-95 % for years 2017 to 2020 for 20 resistant varieties (https://observatoire-cepages-resistants.fr/les-resultats/)	Report containing details of the pilot trials, including: overall performance of the tested products against conventional pesticides (reduction of pest outbreaks, reduction of normal pesticides usage) (D.3.5)
KPI.4	Up to 50% reduction in crop residue generation, specifically in hop, grapevines, and date palm tree, by using their residues in new BF	Report containing details of the pilot trials, including reduction of crop residues) (D.3.5)
KPI.5	Case of Studies will allow design, at least 3, of best practice manuals for the use of alternative (non-chemical products) in integrated crop management and/or integrated pest management strategies to reduce the environmental impact	Report according D.6.3
KPI.6	Increase in TRL during the execution of Technological Cases of Study. At least 8 new technologies tested and validated for the implementation of systemic sustainable innovation will increase their TRL	Technical reports according D.2.6, D3.5 and D.4.6
KPI.7	Development of a Web platform for small farmers to assess the three pillars sustainability, validated by at least 25 farmers	Web platform development (D.5.1)
KPI.8	20 % increase of smallholder's profitability in the project crops based on agroecological innovations adoption, by: saving saplings from mortality, mitigating the cost of plant replacement, by increasing -acid content of hops, lower expenses chemicals input use, mitigating the yield drop	Report according D.5.3
KPI.9	High acceptance (more than 60%) of sustainable systemic innovation adoption by small farmers validated in specific surveys sent to (at least) 50 small farmers, in the participant countries	Report on sustainability evaluation as per D.6.4
KPI.10	Detection of at least 3 technological innovations by entrepreneurs, and others, to add value to the SUSTEMICROP approach	Report on sustainability evaluation as per D.6.4
KPI.11	Design and publication of at least 3 roadmaps (in 3 crops) for improved adoption by small farmers in the Mediterranean context to provide recommendations to policy makers	Report on sustainability evaluation as per D.6.4
KPI.12	Report on (at least) 3 replicability studies based on the potential Project solutions obtained for their use in other crops, regions, or countries	Report according D.6.3

KPI.13	Writing of at least 6 scientific articles and 5 technical papers	Report on Communications and Dissemination performance, according to the monitoring tool
KPI.14	Project presence in at least 6 relevant scientific conferences and industry events at different levels: regional, international	Report on Communications and Dissemination performance, according to the monitoring tool
KPI.15	At least 5 Workshops, Networking, and training actions to be organised by SUSTEMICROPs partners with at least 150 attendants	Report on Communications and Dissemination performance, according to the monitoring tool
KPI.16	Creation of a website for the consortium with at least 300 visitors/month	Web page development (D.7.3)
KPI.17	Use of Social Media accounts linked to the Project with at least 500 followers on *Twitter* and/or *Facebook/Instagram*	Creation of social media accounts (D.7.3)
KPI.18	Send out of at least 3 Newsletter during the project and 2 press releases	D.7.3
KPI.19	At least 3 dissemination tools: elaboration of infographics and communicative videos	D.7.3
KPI.20	Final conference with at least 60 participants and at least 10 policy makers involved and informed	SUSTEMICROP events and Conference attendance (D.7.4)

8.- Others

Other aspects like Intellectual Property Rights Management, Data Management, and Ethical Issues will be executed in accordance with the provisions of the PROJECT CONSORTIUM AGREEMENT, which has been previously signed by all the partners and can be found at the Dropbox folder z_CONSORTIUM AGREEMENT, where it is accessible to all partners.

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