



D7.2.2 - OUTCOME OF THE ANNUAL MEETING

Lead Beneficiary: Università Cattolica del Sacro Cuore (UCSC)

Authors: Edoardo Puglisi (UCSC), Maria Elena Antinori (UCSC), Alice Tediosi (OPENT), Dina S.S. Ibrahim (ARC), Francesc Domingo-Olivé (IRTA), Elena González Llinàs (IRTA), Georgios Karakatsanis (EVO), Diogo Proença (UC), Isabel Luci da Conceição (UC)

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DOCUMENT INFORMATION

Grant Agreement	
Project title	Sustainable innovations for Regenerative Agriculture in the Mediterranean area
Project acronym	SIRAM
Project coordinator	Edoardo Puglisi, UCSC
Project duration	1 June 2022 – 31 May 2025 (36 months)
Related work packages	WP 7 – Coordination and management
Related task(s)	
Lead organisation	UCSC
Contributing partner(s)	All
Due date	31 May 2023
Submission date	15 June 2023
Dissemination level	Public

Siram meeting, 6th June 2023, Morocco

Program of the meeting:

- Updates on ongoing, past and future work to be done for each WP
- Planning of RNA-seq experiments (WP3)
- Organization of courses and workshops
- Planning of future appointments

The first annual SIRAAM meeting was held in a hybrid form (Fig 1). The attendance list of the meeting is reported in Table 1, with the form (in presence/remote) indicated per each participant

Table 1. List of attendants of SIRAAM meeting in Mèknes, Morocco.

Participant	Affiliation	Presence/Remote
Edoardo Puglisi	UCSC	P
Andrea Fiorini	UCSC	R
Vincenzo Tabaglio	UCSC	R
Luigi Lucini	UCSC	R
Maria Elena Antinori	UCSC	R
Biancamaria Senizza	UCSC	R
Alice Tediosi	OPENT	R
Sara Bertuzzi	OPENT	R
Dina S.S. Ibrahim	ARC	P
Marwa Elderiny	ARC	P
Francesc Domingo-Olivé	IRTA	P
Elena González Llinàs	IRTA	P
Georgios Karakatsanis	EVO	R
Rachid Lahali	ENAM	P
Abderrahim Lazraq	USMBA	
Paula V. Morais	UC	R
Diogo Proença	UC	R
Isabel Luci da Conceição	UC	P
Lobna Hajji	CRRA	R
Michel Chalot	UBFC	R
Jun Zhou	UBFC	P

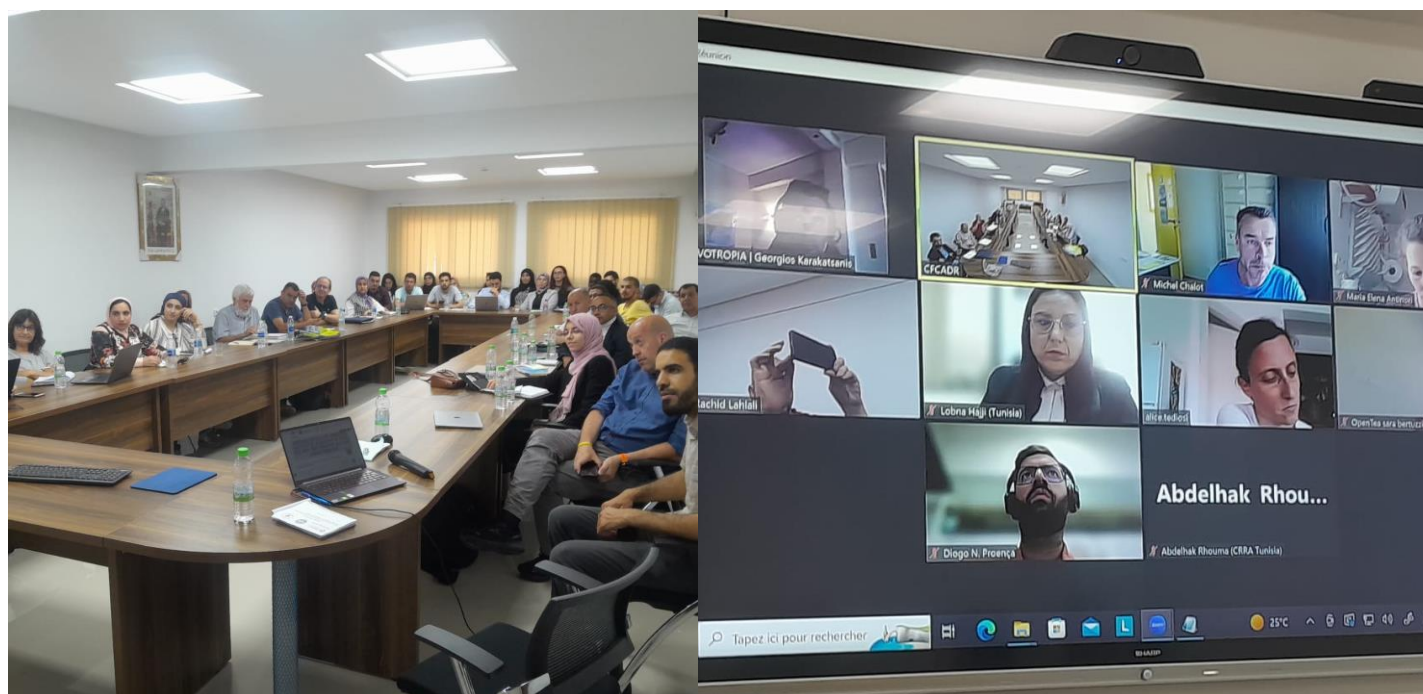


Fig. 1- SIRAM meeting in Mèknes, Morocco.

1.1 Updates on ongoing, past and future work to be done for each WP (6th June 2023, 10.30 am-2 pm Morocco time)

WP1: Screening and selection of beneficial microorganisms, recyclable biomasses and resistant varieties

The activities of WP1 are concluded. Results from T1.1 (Beneficial microorganisms), in particular can be published, since also genomes of isolates should be available to each partner. The partners involved in this task can start figuring out which publications they can produce, so that it could be possible to find out common features among findings from this task and publish common works and features among partners.

WP2: Formulation and tailoring of regenerative agriculture solutions for different Mediterranean Scenarios

To monitor efficiency of formulation in pot and field experiments, partners should determine strain specific primers by genome analysis. UBFC and UCSC can support other partners in this task and in genome analysis in general. Pot tests have been started for CS1, CS3, CS5 and CS8.

WP3: Unravelling basic mechanisms in soil-plant-microbe interactions

Regarding T3.1, UBFC has received a good offer from a company for RNA-seq. Three RNA-seq experiments are planned for SIRAM, involving mainly UBFC, UCSC, ENAM and ARC/UC. In fact UBFC will help in experimental design and data analysis, thanks to its expertise in this field, while UCSC,

ENAM and ARC/UC will perform the experiments. The partners not directly involved in the experiment can participate in the experimental design. For the experiments in Morocco and Egypt, it should be decided with the sequencing company if it would be better to extract RNA directly in these countries (maybe with the help of some colleagues from UBFC or UCSC) or to send the samples to the company or to other partners. It should be verified if the company can do fast shipping from these countries. The afternoon session was dedicated to the experimental design.

Regarding T3.2, UBFC already made an agreement with the company Novogene to sequence metagenomic pools. Amplification will be made by Novogene. Samples can be collected just after application of a consortium and sometime after. The metabolomic facility in UCSC can help all partners with the data analysis.

WP4: Case studies reflecting different Mediterranean scenarios

As reported in M4.1 and D4.1, all case studies have been initiated. The monitoring of soil, plant and microbial indicators has also started, as reported in M4.2. It is proposed that all the CSs leaders meet by videoconference before the end of November, to check among all if all planned activities in CSs are developing adequately and monitoring is proceeding for everyone as stated. Future tasks and activities will also be checked out to foresee its correct development. This meeting will probably be in September.

WP5: Socio-economic analyses

It has just been published MS 5.1, which lists all available data from all partners, needed for the construction of an economic model for regenerative agriculture. From September 2023, active collection of these data will start from each CS, so that EVOTROPIA can outline this model.

WP6: Dissemination and communication

WP leader summarizes all the publications and events which have already been accomplished: the website, brochures in different languages (English, Arab, Catalan, Spanish and Italian), posts on social media (Linkedin and Facbook), sharing of communication materials like a presentation template for all partners. Most of the courses and workshops foreseen in the project have been scheduled by the partners, but some common organization is necessary to avoid overlaps. This point was further discussed in the afternoon session.

1.2 Planning of RNA-seq experiments (WP3) (6th June 2023, 3 pm – 4 pm)

Partners involved in the experimental part (UCSC, ARC/UC, ENAM) will share the experimental set-up, like

- using inert substrate instead of autoclaved soil can favor analysis of results. There could be some problems in using this set-up for ARC/UC experiment, where nematodes are used. Preliminary experiments and literature searching will help in deciding the set-up for this experiment. In general partners will try to use a common substrate.
- focusing on better annotated genes, which could reduce the novelty of the experiment but also favoring analysis of results and lead to greater improvement of knowledge in the field.
- if possible, finding of novel potential biomarkers in studied mechanisms. These discoveries could be of economic interest and prone to technology transfer, thus involving WP5, too. In

this case, it would be important to understand how to publish results in order to be able to patent them.

In general all partners will search the literature to understand the methods and the novelty of the planned experiments. By the end of June or the beginning of July, there will be another meeting among the partners involved to share protocols and give a definite design to experiments.

1.3 Organization of courses and workshops (6th June 2023, 4 pm – 5 pm)

Partners have planned their courses and workshops in terms of contents and hosts. OpenT and UCSC are supporting communication activities from a technical and a scientific point of view. OPENT in particular will provide a template for course organization and program, so that each partner can outline its. No budget has been allocated to host external speakers. Workshops are more related to local public and can be in local language. Both, courses and workshops, can be co-organized involving other projects than SIRAM, but in the promotion it should be clearly stated that two or more projects are involved and all the logos should be visible.

EVOTROPIA plans to add some workshop events to present the socio-economic analysis developed in SIRAM.

A final conference for the project will also be organized.

Table 2 lists courses and dates as agreed during the meeting. Table 3 lists workshops and dates as agreed during the meeting. Dates have been scheduled so that overlaps are avoided and partners can take part to all workshops and courses either as speakers or as public.

Table 2. List of courses, partners involved and scheduled dates for SIRAM project.

Partner involved	Course title	Dates
UCSC	Agronomical techniques for regenerative agriculture: no-tillage and cover crops	From Sep-Oct 2023 to May-June 2024
CRRA	Resistant crop varieties to face abiotic and biotic stresses in Mediterranean area	May-June 2024
ENAM	Beneficial microorganisms for biostimulation and induced systemic resistance	October 2024
IRTA	Recycle and valorization of organic biomasses in regenerative agriculture	September-October 2024

Table 3. List of workshops, partners involved and scheduled dates for SIRAM project.

Partner involved	Workshop title	Dates
UCSC/ISA	Microbial biostimulants in agriculture	September 2023
UCSC	Managing organic farming systems with Regenerative Agriculture practices	April-May 2024
ENAM	Management of olive diseases	7 th June 2023
ARC	Management of potatoes diseases	March 2025
ARC	Management of olive diseases	October 2024
ARC	Management of citrus diseases	June 2024

ENAM	Management of citrus diseases	7 th June 2023
IRTA	Improving sustainability of winter crop rotations by introducing regenerative agricultural practices	April 2025
IRTA	Regenerative agricultural practices in irrigated maize for a sustainable production	July-August 2024
CRRA	Agroecological practices for sustainable olive production	March 2025
CRRA	Sustainable management approaches to improve vegetables crops resilience towards abiotic and biotic stress	May-June 2024
UC	The impact of plant-parasitic nematodes on bacterial and fungal microbiome of the potato-growing soils	October 2024

1.4 Planning of future appointments (6th June 2023, 5 pm-5.30 pm Morocco time)

Regarding mid-term report, UCSC will start organizing it and share a draft with all partners. It is due by the end of November (M18).

The next annual meeting can be in January/March 2024 in Egypt, hosted by ARC.