

PRIMA COLLABORATE

An Event Uniting Med Researchers in Malta for Innovation

9th February 2024

PRIMA Pitching Session

The Malta Council for Science & Technology











Prof. Abdelmalek Atia

University of El Oued, Algeria









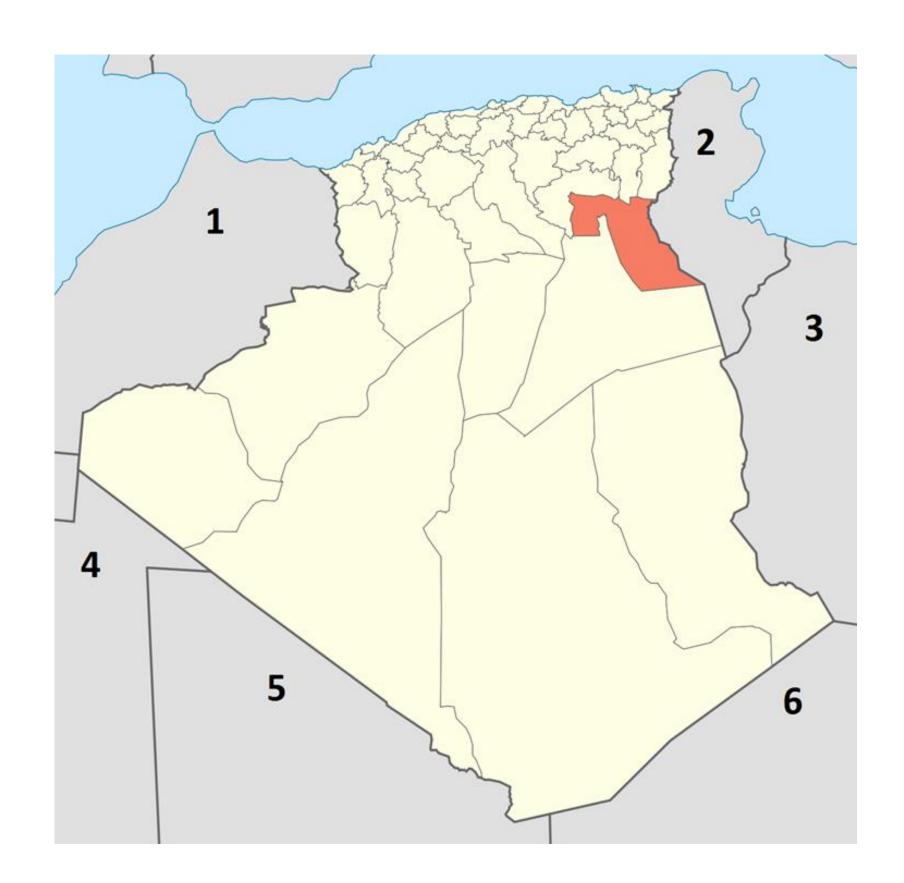




- Prof. Abdelmalek ATIA
- University of El Oued, Algeria
- <u>abdelmalek-atia@univ-eloued.dz</u>

El Oued University was established in 2012. it composed of 8 faculties : Faculty of Technology **Faculty of Exact Sciences Faculty of Natural Sciences and Life** Faculty of Arts and Languages **Faculty of Social and Human Sciences Faculty of Economic Sciences Faculty of Law and Political Sciences** Faculty of Islamic Science https://lang.univ-eloued.dz/en/

Also, It has 24 Research laboratory















- Type of partners that we are looking for: research institutions
- the countries : France, Turkey, Tunisia, Malta, Italy
- Thematic area: WEFE Nexus, Agriculture





Assist Prof. Dılhun Keriman Arserim Uçar

Bingöl University, Turkey











- **1. Name of Contact Person:** Assist Prof. Dılhun Keriman Arserim Uçar
- Bingöl University, Secondary or Higher Education Establishment 2.
- **Country:** Türkiye 3.
- **Contact details**: kerimanarserim@gmail.com;ducar@bingol.edu.tr 4.
- encapsulation processes with the digestion experiments.
- > Your Achievements/Success Stories (Optional): I have on-going and competing projects on the encapsulation of bee products and the valorization of food waste by fermentation processes.





> Short description of your organisation: I am working in the Nutrition and Dietetics Department of Bingöl University. I have expertise in the valorization of food waste, the production of bacterial cellulose and cellulose from waste, the encapsulation of bioactive compounds for food and nutraceutical applications, and the valorization of food waste by fermentation processes. My university is one of the pilot universities for honey bee products. I have a project on different extraction methods for honey bee products and the encapsulation of bee products in order to test the bioavailability of the



Prospective project

✓ Encapsulation of Honey Bee Products After Fermentation (FermentHBP4Health)

- natural active compounds to promote health and well-being by the volatilization of honey bee products.
- (IA):
- Action
- ✓ I am willing to submit the proposal to **this year's** PRIMA/MCST-TUBITAK Call.

Mediterranean diet



✓ Bee products contain bioactive compounds that have antibacterial, antioxidant, anti-inflammatory, and anticancer activity. In addition to traditional and modern extraction, fermenting the bee product with probiotic bacteria and yeast may improve the bioavailability of honey bee products, bioactive compounds, proteins, fatty acids, and dietary fiber. Encapsulation of these

✓ Thematic Area 3: Agri-Food Value Chain: Valorizing food products from the traditional Mediterranean diet/TOPIC: 1.3.1

✓ Encapsulation of Honey Bee Products After Fermentation (FermentHBP4Health) will be effective and sustainable technologies adapted to Mediterranean Food Systems to decrease food loss and waste; Type of action: (IA) Innovation and

✓ I want to be a Turkish partner for Thematic Area 3: Agri-Food Value Chain: Valorizing food products from the traditional





- \succ I am looking for research institutions and industry partners to participate in the project
- products from the traditional Mediterranean diet
- university has completed projects on honey bee products



want to be a Turkish partner for Thematic Area 3: Agri-Food Value Chain: Valorizing food

> My organization is one of the pilot universities for bee and honey bee products. My university has its own bee yard, and participates in the geographical indication of bee products. By the way, my





- green extraction and encapsulation technology
- production of healthy food formulations for a sustainable and healthier diet
- not only to formulate nutritive food products but also to improve food quality and safety
- extraction. improve the nutritional value and functionality of foods
- \succ This proposed project will contribute to healthier Mediterranean food
- Promote a healthy, safe, and sustainable food system



 \succ This proposed project will develop a new concept for functional and nutraceutical formulations using new

 \succ Natural active compounds from honey by-products with probiotics or bio-protective cultures for the

 \succ These formulated active compounds could be used in healthier food formulations based on bee products,

 \geq Bioactive compounds in honey bee products will be more available by probiotic microorganism fermentation

 \succ A novel functional ingredient derived from bee products through the processes of fermentation and



Prof. Byron Baron

University of Malta

The Malta Council for Science & Technology









- Prof. Byron Baron
- University of Malta
- State University
- Malta
- byron.baron@um.edu.mt
- Our proof of concept was the PerMaVia project

Prospective project

- Title: Tailoring permaculture practices to better suit the Mediterranean climate (**AdeqMedi**)
- effective soil nutrient recycling, data collection for real-time decision-making and pest management systems.
- Thematic area: Sustainable farming systems under Mediterranean environmental constraints
- Proposal for **2024** MCST-TUBITAK and **2025** PRIMA Call
- Willing to coordinate the project





Project overview: The Mediterranean climate is challenging for permaculture-based farming systems. We aim to modifying common permaculture practices to better suit the microclimate; Specific objectives include: improved water capture and use,

What we are looking for:

- Partners in research institutions and industry to design, build and test our ideas • Partners from all Mediterranean countries
- Looking to join a project in Thematic Area 2 of PRIMA
- Our expertise include: permaculture, soil sensing, biochemistry, and bioinformatics
- Please contact us by email for further discussion, networking or potential collaborations





Adrian Bugeja Douglas

University of Malta

The Malta Council for Science & Technology









THE INSTITUTE OF EARTH SYSTEMS **Division of Rural Sciences and Food Systems** University of Malta

- Adrian Bugeja Douglas
- University of Malta
- Rural Sciences and Food Systems Department
- Email <u>adrian.bugeja-douglas@um.edu.mt</u>
- Whatsapp no. 00356 79318868
- Participated in a number of E.U. and locally funded projects
- For example: SIMBIOITIC, PROMED, CYPFIRE, VENERGY, MOLCAMH, (Maltese Honey), T-CheseMal, MEDIWAT, MALTESE OLIVES, CROPGEN, BIOFUMIGATION OF SOILES, GREENSCAPES and others

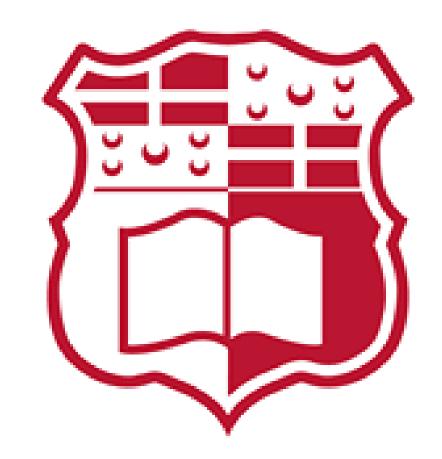




THE INSTITUTE OF EARTH SYSTEMS Division of Rural Sciences and Food Systems University of Malta

- The RSFS possesses the baseline expertise in the documentation and genetic characterization of plants
- Expertise in the extraction of DNA and the DNA sequencing.
- Fully equipped lab for DNA extraction, PCR and sanger sequencing.
- We have access to an experimental apiary in the government farm.

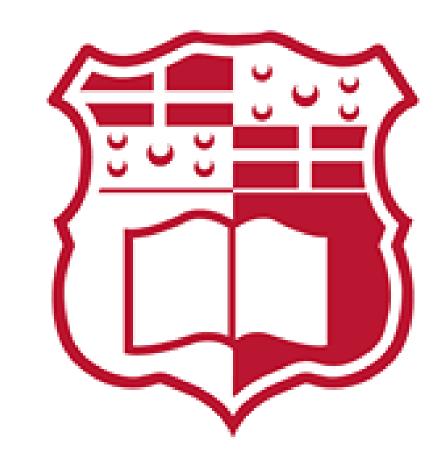




THE INSTITUTE OF EARTH SYSTEMS **Division of Rural Sciences and Food Systems** University of Malta

- The optimization of cultivation practices through AI to combat desertification, water scarcity and salinization of groundwater
- The extraction and utilisation of secondary metabolites from plants with medicinal and nutraceutical potential
- The determination of heavy metals and toxic substances in products for human consumption





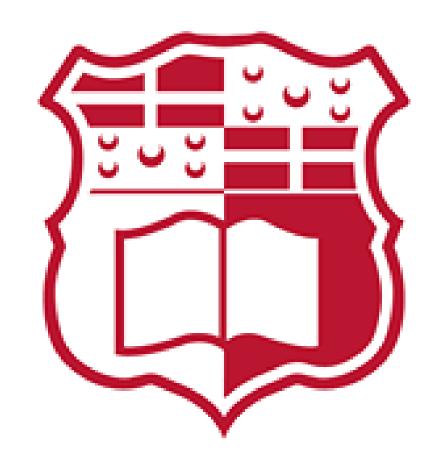
Prospective project

The thematic area we are mainly interested are:

PRIMA Section 1 Farming Systems

PRIMA Section 1 Agri-Food value chain









Dr. Christine Podrini

The BioArte Ltd, Malta

The Malta Council for Science & Technology









- Dr Christine Podrini
- The BioArte Ltd
- Microbial and Fungal Analysis with NGS
- MLSP: Malta
- <u>c.podrini@thebioarte.com</u>
- Grants awarded: Aging and gut profile, GUMBS-GUT microbiome personalised sports nutrition, Erasmus+Programme, BIOMENVACn: Nasal biomarkers identification to reduce severity of SARS-CoV-2, Research article: Nanopore Vs. Illumina Szoboszlay et al. 2023 Microorganisms; SkinDUO[™] Podrini *et al.* 2023 Microorganisms

Prospective project

- **Title** of the Project Idea (if applicable): NA ullet
- microbiota composition in clinical studies, soil, water
- Specify if you are willing to submit the proposal to this year's PRIMA/MCST-TUBITAK Call: <u>Prima</u> lacksquare
- Specify if you are willing to coordinate the project: partners only





Concise **overview** of the project idea, including specific objectives: <u>Assessments of the impacts of the gut</u>

A few examples are listed below:

- med.org)
- Indicate the countries from which you are seeking potential partners: food, clinical
- ulletarea: <u>AGRO-FOOD VALUE CHAIN</u>
- and fungal communities
- funding opportunities: interested



• Specify the type of partners you are looking for (e.g., research institutions, industry partners, etc.) The impacts of the olive oil by-products on the bioaccesibility and the composition of the gut microbiota - PRIMA (prima-

Specify if you are looking to join a project on a specific subject or within a particular PRIMA thematic

• Outline the expertise your organization can offer if not for this year's PRIMA call: <u>NGS</u> for bacterial

• Express your interest in networking further to explore potential collaborations for future



Prof. Lalit Garg

University of Malta

The Malta Council for Science & Technology









- Main contact person: *Prof Lalit Garg*
- Name of the organisation you represent: University of Malta
- Short description of your organisation: UM is the leading higher education institution in Malta
- Country where your organisation is based: Malta
- Contact details (if you wish to share it with the participants and PRIMA NCPs): <u>lalit.garg@um.edu.mt</u>

Prospective project

- FoodSIM (Food Shelf-life determination using IoT-based Monitoring)
- •
- Mediterranean Food Systems to decrease food loss and waste.
- Specify if you are willing to submit the proposal to **this year's** PRIMA/MCST-TUBITAK Call: <u>PRIMA</u>
- Specify if you are willing to **coordinate** the project: <u>Yes!</u>





This project proposes FoodSIM, a novel food and surrounding environment monitoring and information exchange framework. It uses low-cost Radio Frequency Indemnification Devices – RFIDs, temperature, sunlight exposure and humidity sensors, a mobile camera and a mobile app.

PRIMA Section 1 – Food Value-chain in the Nexus 2024Topic 1.3.1 (IA) Developing cost-effective and sustainable technologies adapted to



- Ideal partners would be agri-food producers, processing, handling, transportation and warehousing organisations, market research, business strategy, research institutes, government bodies, and Universities.
- Potential partners can be from Croatia, Cyprus, France, Germany, Greece, Italy, Luxembourg, Malta, Portugal, Spain, Slovenia.
- We are also keen to join other potential projects from this or other PRIMA thematic area.
- We can support such projects through our expertise in information communication technology and its applications and also collaborating with other University departments.
- We are highly interested in networking further to explore potential collaborations for future funding opportunities





Dr. Simona Paolacci

AquaBioTech Group, Malta











- Dr Simona Paolacci
- AquaBioTech Group
- Consultancy company specialized in Aquaculture, Fisheries and Marine Environment
- Malta
- sip@aquabt.com

Prospective project

- Cultivation of the seaweed *Gracilaria gracilis* in the Mediterranean
- To develop a commercial production of this seaweed for the extraction of phycocolloids (substances employed as gelling agents in food, coatings and dressings in pharmaceuticals, stabilizers in biotechnology, and ingredients in cosmetics).
- Call: Section 1 Farming Systems in the Nexus 2024
- Willing to coordinate



AquaBioTech Group





- PARTNERS: Research institutions, fish farmers interested in IMTA, any company using phycocolloids in their products, ONG and organizations interested in analysing the socio-economic impact of introduction of this commercial activity in the Mediterranean
- Any Mediterranean country
- Call: Section 1 Farming Systems in the Nexus 2024
- Aquaculture (fish & seaweed), aquaponics, vertical farming





Moundir Lassassi

National Council for Scientific Research and Technologies (CNRST), Algeria











- Moundir LASSASSI Research director Interim Secretary General
- National Council for Scientific Research and Technologies (CNRST) Algiers Algeria
- President of CNRST. Pr. Mohamed Tahar Abadlia
- E-mail: <u>m.lassassi@cnrst.dz</u> <u>https://www.cnrst.dz</u>

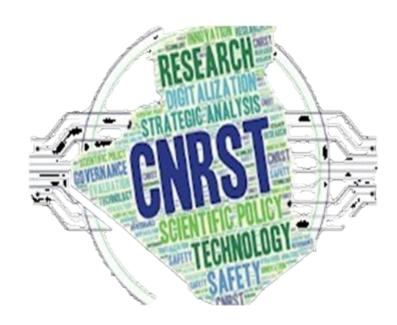
CNRST

- The National Council for Scientific Research and Technologies is a public body working for the President of the Republic regarding all aspects related to national scientific research, innovation and scientific collaboration.
- The Council has completed the institutional edifice of research in Algeria, giving the National Research System a superstructural body dedicated to national research policy and related strategies.





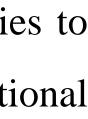
الجمهوريـــة الجزائـريــة الديمقراطية الشعبية



Missions

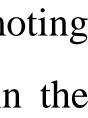
The missions of the Council reflect the will of the public authorities to set up a body capable of injecting new dynamic into the National Research system through:

- The promotion of **technological and scientific innovation** in both industrial and academic environments.
- The proposal of measures allowing the **development of national R & D & I capacities.**
- **Evaluation of the efficiency** of national mechanisms for promoting research results for the benefit of the national economy within the framework of sustainable development.









Missions: Providing opinions

- Intersectoral coordination of research activities.
- Evaluation of the national policy of scientific research and technological development, its choices and its impact.
- Priorities among national research programs.
- The main orientations of the national policy for scientific research and technological development.
- Support of scientific development to public policies.

The national Plan for the Development of Scientific Technological Research and Development.





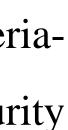
Activities Thematic Workshops

- The Contribution of Emerging Technologies to Saharan Agriculture: case of Algeria : Smart Irrigation System, Contribution of Biotechnologies to the Improvement of Agricultural Production Systems, The Contribution of Drone Utilization in Precision Agriculture.
- Water Security: A Global Challenge, Innovative Solutions for Algeria -Forthcoming.
 - Technopoles: Catalysts for Innovation and Socio-Economic Development -The Case of Agri-Food Technopoles - Forthcoming.
 - Artificial Intelligence and Its Socio-Economic Impact on Algeria-Forthcoming - Application of IA in precision Agriculture for food security - Forthcoming.











Simone Cutajar Dr Daniele Alberoni

University of Malta University of Bologna









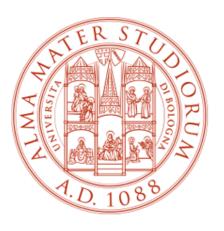


- Simone Cutajar & Dr Daniele Alberoni
- University of Malta & University of Bologna
- **UoM**: Founded in 1769, it is a central hub for international academic exchange in the Mediterranean. It offers a wide range of programmes across fourteen faculties.
- **UNIBO**: Founded in 1088. This historic institution combines a rich tradition of academic excellence with a focus on research and innovation in a range of academic programmes that span from the humanities to the sciences.
- <u>simonecutajar@gmail.com</u> & <u>daniele.alberoni@unibo.it</u>

Prospective project

- **MAPS**: Microbiota and Pollination Synergy for Sustainable Agroforestry in the Mediterranean \bullet
- \bullet apply findings for sustainable Mediterranean agriculture.
- Thematic Area 2: Farming Systems in the Nexus. Topic 2.2.1 (RIA) Revitalizing agroforestry practices for sustainable land use and climate resilience in the Mediterranean region.



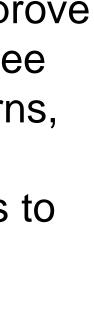


ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA



MAPS aims to revolutionise Mediterranean agroforestry by merging drone technology with gut bee microbiota research to improve pollination efficiency and ecosystem health. Improve Bee Health: Study and enhance gut microbiota composition to induce bee immune response for resilience and pollination efficiency. Map and Optimise Pollination: Map and improve pollination patterns, targeting areas for intervention. Increase Yields and Biodiversity: Leverage data to boost crop productivity and biodiversity. Scale Solutions: Develop and scale innovative strategies for broader application. Collaborate: Collaborate with stakeholders to







- Still 'work-in-progress'.
- We are looking for partners (specifically with expertise in crop yield and biodiversity).
- Interested in joining other projects, especially within the subject areas mentioned.
- Both parties have ample experience in managing multi-partner projects and have participated to a MSC Action coordinated by UNIBO.
- Interested in networking further to explore potential collaborations for future funding opportunities.





Dr Matthew Agius

University of Malta

The Malta Council for Science & Technology









Prof. Sebastiano D'Amico / Dr Matthew Agius

sebastiano.damico@um.edu.mt / matthew.agius@um.edu.mt

Prospective project

- Water management
- We are willing to submit the proposal to **this year's** PRIMA/MCST-TUBITAK Call
- We are willing to **coordinate** the project





L-Università ta' Malta Faculty of Science

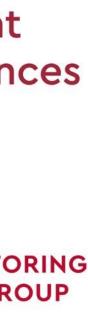
Department of Geosciences



SEISMIC MONITORING & RESEARCH GROUP

Department of Geosciences Faculty of Science University of Malta

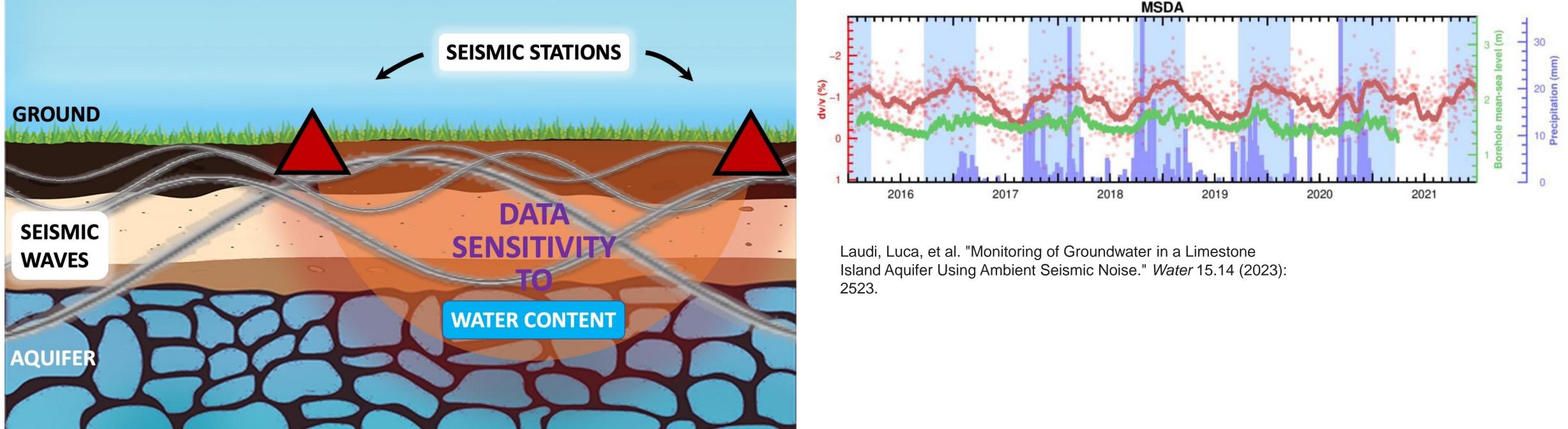
Imaging of Groundwater for Aquifers using ambient seismic noise and geophysics





Science

- Seismic noise is everywhere, and it is *FREE!*
- We do not need to wait for an earthquake or make an explosion.
- The technology has been tested next to rivers, lakes, and forests.
- And now tested on very small islands of Malta.







A few examples are listed below (not exhaustive):

- We are mainly interested in join forces with research institutions as well as industry partners • We would like to also engage with countries outside the EU
- We are also interested in joining other proposal were we can actively contribute in water management and monitoring strategies
- We express our interest in networking further to explore potential collaborations for future funding opportunities



Ideas: Making technology easier and accessible through handheld devices, monitoring of the replenishing of aquifers





Prof Mokhtar Sellami

National Council for Scientific Research and Technologies











Prof. Mokhtar SELLAMI National Council for Scientific Research and Technologies International Research and Cooperation Algiers - Algeria

Algeria in PRIMA and AU-EU Programs The ambition for a sustainable partnership in Water Food Energy Nexus

121 projects managed by Algerian entities (105 funded by DGRSDT and 16 by EU)

Algeria research strategy was not focussing on internation projects because of the availability of national funds, In 2 policy makers concluded on the priority to engage in m collaborative and competitive projects, to strengthen nation capacities and capabilities. In 2017 Algeria was the first court from the south to engage in PRIMA with 20 000 K Euros. participate to 45 funding projects contributing to sustainable of natural resources, economic growth and citizen well-being.











ional	PRIMA: Success story 'CAMELMILK ': This project bey
2008	fostering cooperation in research helped smallholders,
more	young entrepreneurs to adopt innovative
ional	organizational technologies that comply with Europ
untry	food standards, enabling them to stimulate commen
. We	interaction between players in the camel milk value ch
e use	and Building Bridges Across the Mediterranean.

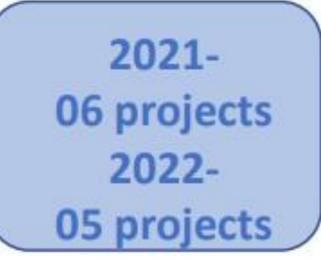








The LEAP-RE programme is dedicated to advancing renewable energy technologies and promoting their widespread adoption through innovative research and development, collaboration, and education.

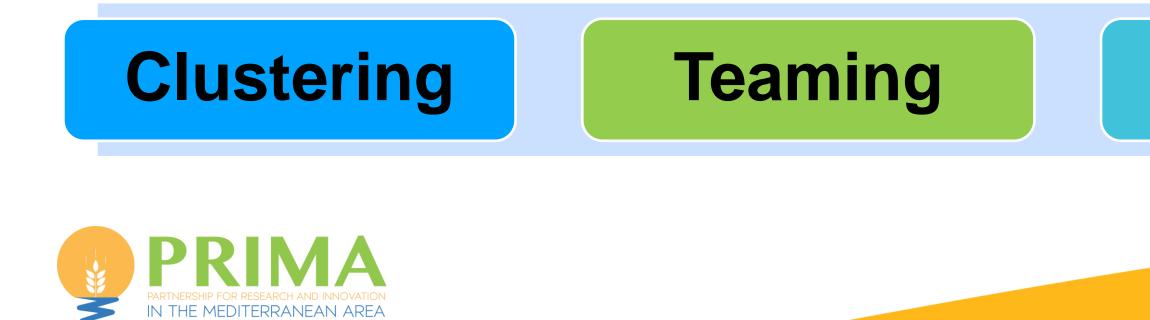




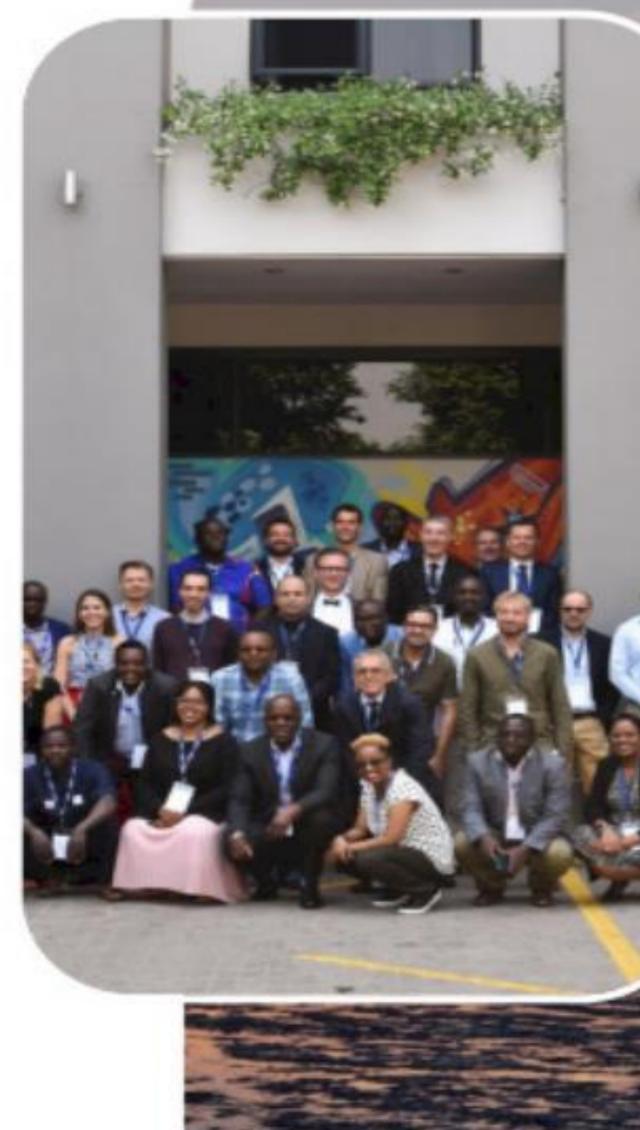
Algeria is participating in 11 projects (First and second calls 2021 - 2022

Our ambition is to create a strong bridge between Europe and Africa in common research and scientific cooperation programs, Malta could be a pillar

By promoting a pathway for empowering local research while fostering the conditions for transforming research into effective innovation, tailored to specific societal needs while acknowledging regional discrepancies.



Twinning







Hounani Kawther

Faculty of Life Sciences

The Malta Council for Science & Technology









· Hounani Kawther, Ingenieur Agronome

 Faculté des Sciences de la Nature et de la Vie, Département des Sciences de l'agronomie, Ex-ITMA, BP. 89. 2200 Sidi Bel Abbes, Algeria.

Introduction

With the acceleration of climate change, continued urban growth and increased water abstraction for various uses, water management is under pressure, in the Mediterranean and around the world. The effects of climate change can already be seen in Mediterranean production regions: earlier phenology, warmer temperatures, particularly during ripening, and a greater water deficit. These changes are set to continue over the coming years, and will require the use of appropriate tools (models and indicators) to characterise these changes and help define the best strategies for adapting to them. Technological, agro-ecological, organisational and political innovations are being proposed and tested to ensure sustainable and concerted management of this resource. How can we analyse these innovations, the conditions under which they are being developed and their impact at local level?



Indicate the thematic area and PRIMA section to which the project idea aligns

This research is based on endives at the level of the plant and its fruits destems & minus compared their responses to the environment. They are also based on information at the level of cultural fields allowing us to repel the functioning of the cubes in interaction and the cultural mentions.

Lee is organized into 4 functional groups and thematic teams. Tremble's functional teams provide corporate services based on testing and experimentation particularly in terms of app.



Thematic teams develop together research on:

	Ecophysiology of fruit quality
	Acquisition and management of resources in the plant
Ø	Coupling between transfers and biogeochemical cycles
	Remote sensing



Yes, we are willing to take the responsibility of bringing this project to PRIMA Call.



As specialists in the environment and agriculture, we aspire to horizons of sustainable development in the Mediterranean.



Jo Sakota Alex Sakota

Bio Aqua Garden Ltd









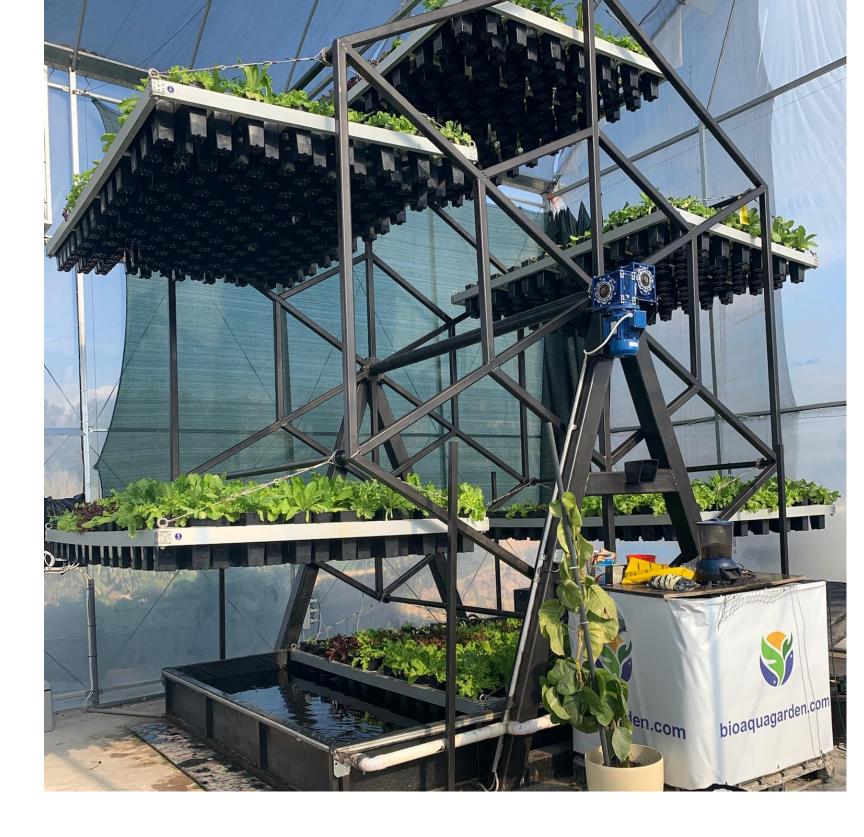


- Jo Sakota & Alex Sakota
- Bio Aqua Garden Ltd.
- Innovative patented system using RAS / aquaponics water and plants are nurtured in compost organic/soil without using pesticides and chemicals
- Malta
- office@bioaquagarden.com
- Operating Aqua/Fish, AgriPV. operations in Ta Qali, Malta

Prospective project

- Looking to join projects related to RAS, AgriPV operations, etc.
- We are now introducing our Patent Innovative Biosoilponics Wheel that we have rein invented to be a very easy assembling method solution
- We are willing to collaborate and propose a project to **this year's** PRIMA/MCST-TUBITAK Call





- We are looking for potential partners who have either farms which would like to convert to Agritech farming or who have land which they would like to convert to Agritech/Agrivoltaic Aquaponic setup using our Innovative wheel, we are also looking into University who would like to collaborate to test our BIO products and best methods for dehydrating crops.
- We are willing to work with any country that is willing to collaborate with us.
- We would like to join a project that is specifically looking into growing crops in greenhouses using a vertical method that would like to use recycled water, low energy consumption whilst testing the length of time to grow crops using an aquaponic system
- Our Unique Patent Innovative BIOSOILPONICS wheel is unique as it is Carbon negative, recycling water with minimum energy use, producing BIO crops.
- We would like to collaborate with other countries in order to FUND a mutual project.



PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

PRIMA COLLABORATE AN EVENT UNITING MED RESEARCHERS IN MALTA FOR INNOVATION

SAVE THE DATE 8TH-9TH FEBRUARY 2024



The Malta Council for Science & Technology





GOVERNMENT OF MALTA PARLIAMENTARY SECRETARIAT FOR YOUTH, RESEARCH AND INNOVATION





