



RESEARCH  
& INNOVATION  
FOUNDATION

# AGREEMAR PRIMA Project: A journey from failure to success



Dr. Constantinos F. Panagiotou



*Head of Water Resources Management, Department of Climate and Environment*

*Cyprus Info day- PRIMA Call 2023*

*9TH FEBRUARY 2023, 11:00 - 13:00 (Online)*

# Initial attempts

## Scientific Document (Part II)

<b>Title of Proposal</b>	Integrated participative planning of managed aquifer recharge in the Mediterranean region
<b>Acronym</b>	MEDIMAR

**MEDIMAR (2020)**

### 1. EXCELLENCE

#### 1.1 Objectives

MEDIMAR aims to **develop guidelines integrated with a set of technological and management tools** that will assist water policy makers and water managers to reach Sustainable Integrated Water Resources. **MEDIMAR final goal is to contribute to alleviate the water stress and increase the water availability** on a national/regional/basin level in Mediterranean region by proposing an improved and integrated management of the water cycle, including water reuse, centred in **optimizing the water storage in aquifers**. This will consider **adaptive and innovative water management strategies to optimise water resources and to achieve water security**, such as planning and implementing the storage of water from different sources (flash floods, treated wastewater, industry and agriculture surpluses) in Managed Aquifer Recharge (MAR) schemes according to Integrated Water Resources Management (IWRM) principles. The storage of water in aquifers has clear

## Scientific Document (Part II)

<b>Title of Proposal</b>	Earth obServation and geOSpatial modeling for Soil degradation assessment and sustainable land management
<b>Acronym</b>	SOS4Soil

**SOS4SOIL (2021)**

### 1. Excellence

#### 1.1 Objectives

The general aim of this project is to **develop an integrated and web-based decision support tool for land management, soil erosion control and soil degradation assessment in Mediterranean agroecosystems**. The approach uses an integrated model that allows to characterize the current state of the study areas as well as future risks in terms of future climate and socio-economic changes. Therefore, advanced earth observation products, modelling and scenario simulations are employed in order to provide local agricultural consortia and administrations, regional organizations as well as international institutions with information on the current and future status, as well as adaptation and mitigation strategies. This enables stakeholders to adapt management practices, mitigate current



# MEDIMAR

## Scientific Document (Part II)

<b>Title of Proposal</b>
Integrated participative planning of managed aquifer recharge in the Mediterranean region
<b>Acronym</b>
MEDIMAR

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MEDIMAR aims to **develop guidelines integrated with a set of technological and management tools** that will assist water policy makers and water managers to reach Sustainable Integrated Water Resources. **MEDIMAR final goal is to contribute to alleviate the water stress and increase the water availability** on a national/regional/basin level in Mediterranean region by proposing an improved and integrated management of the water cycle, including water reuse, centred in **optimizing the water storage in aquifers**. This will consider **adaptive and innovative water management strategies to optimise water resources and to achieve water security**, such as planning and implementing the storage of water from different sources (flash floods, treated wastewater, industry and agriculture surpluses) in Managed Aquifer Recharge (MAR) schemes according to Integrated Water Resources Management (IWRM) principles. The storage of water in aquifers has clear

# SOS4SOIL

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Earth obServation and geOSpatial modeling for Soil degradation assessment and sustainable land management
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- Need for stakeholders who are interested to support the proposed project
- Need for a strong case study, for which data are available and can be used to demonstrate the applicability of the proposed approach
- A local partner capable of delivering the assigned tasks
- Collect multiple letters of support
- Very strong partners, including the German Aerospace Agency (DLR), Ben-Gurion University etc.

Main drawback: Last minute preparation!



## AGREEMAR (Starting date: 6/2022)

### Title of Proposal

Adaptive agreements on benefits sharing for managed aquifer recharge in the Mediterranean region

### Acronym

AGREEMAR

### List of participants

Participant No	PI name	Organisation	Country
1 (Coordinator)	Dr. Catalin Stefan	Technische Universität Dresden (TUD)	Germany
2 Partner 1	Dr. Anis Chekirbane	National Institute of Agronomy (INAT), Carthage University	Tunisia
3 Partner 2	Dr. Ronjon Heim (born Chakrabarti)	adelphi research gGmbH	Germany
4 Partner 3	Prof. Joaquín Andreu Álvarez	Universitat Politècnica de Valencia (UPV)	Spain
5 Partner 4	Dr. Constantinos Panayiotou	ERATOSTHENES Centre of Excellence (ECoE)	Cyprus
6 Partner 5	Dr. Teresa E. Leitão	Laboratório Nacional de Engenharia Civil (LNEC)	Portugal



- Challenging to re-build the consortium, which is different than the initial one (legislations, funding etc)
- Consider the reviewers' comments [e.g. show the upscale of the proposal approach within the entire Mediterranean basin]
- Enhance the level of engagement of stakeholders



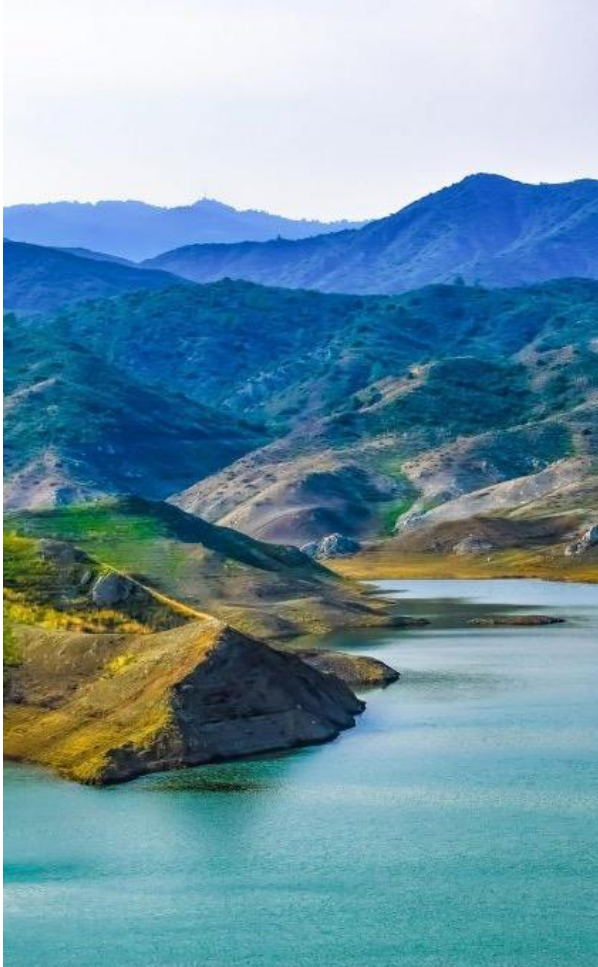
## AGREEMAR

### Challenges in the Mediterranean

- ***Uneven spatio-temporal distribution*** of water availability (i.e., 72% in the North, 23% in the East, 5% in the South → shortages in SE countries\*)
- Water supply heavily affected by ***agricultural intensification*** → necessity to sustain the ***rapid population growth***, and ***extensive tourism*** in coastal areas.



→ Sustainable aquifer-based solutions are needed to store water between seasons in order to fulfil optimal water provisions for food security, domestic supply and preservation of natural groundwater-dependent ecosystems.



**To validate**, optimize and up-scale adaptive and innovative water management strategies, such as MAR solutions, and use of non-conventional water sources to augment aquifer storage.

**To improve** the cross-sectoral uptake of MAR for climate change adaptation and to ensure the adoption of integrated governance models that will guarantee long-term, safe and efficient implementation, based on environmental, social and economic indicators.

**To facilitate** strengthening the institutional and managerial capacities of stakeholders to take up the integrated approach for planning and implementation of MAR.

**To adopt** participative approaches to reduce barriers and fortify linkages among water resources managers and water users thus reducing conflicts and increasing social trust.

**To demonstrate** how the innovative approach for planning and implementation of MAR will lead to better use of freshwater and preservation of natural ecosystem services.

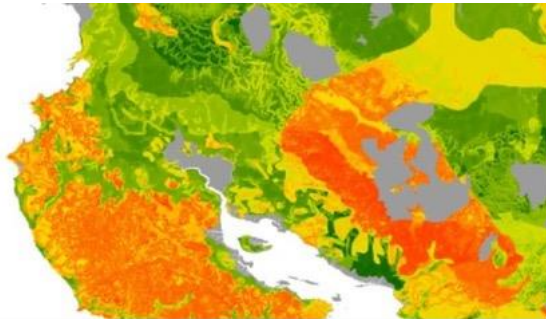
## AGREEMAR

Feasibility  
mapping

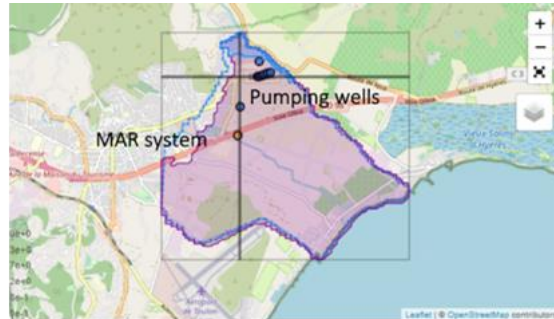
Groundwa  
ter  
modeling

Governance  
systems

Stakeholders  
engagement



Development of a **methodology for the selection of feasible locations for MAR application** based on the integration of demand for groundwater-dependent services, conventional and non-conventional water sources, and intrinsic hydrogeological conditions.



Validation of the feasibility maps through **numerical models at watershed and local scale** to assess the improvements in reliability, vulnerability and resilience provided by the inclusion of MAR schemes in water management schemes.

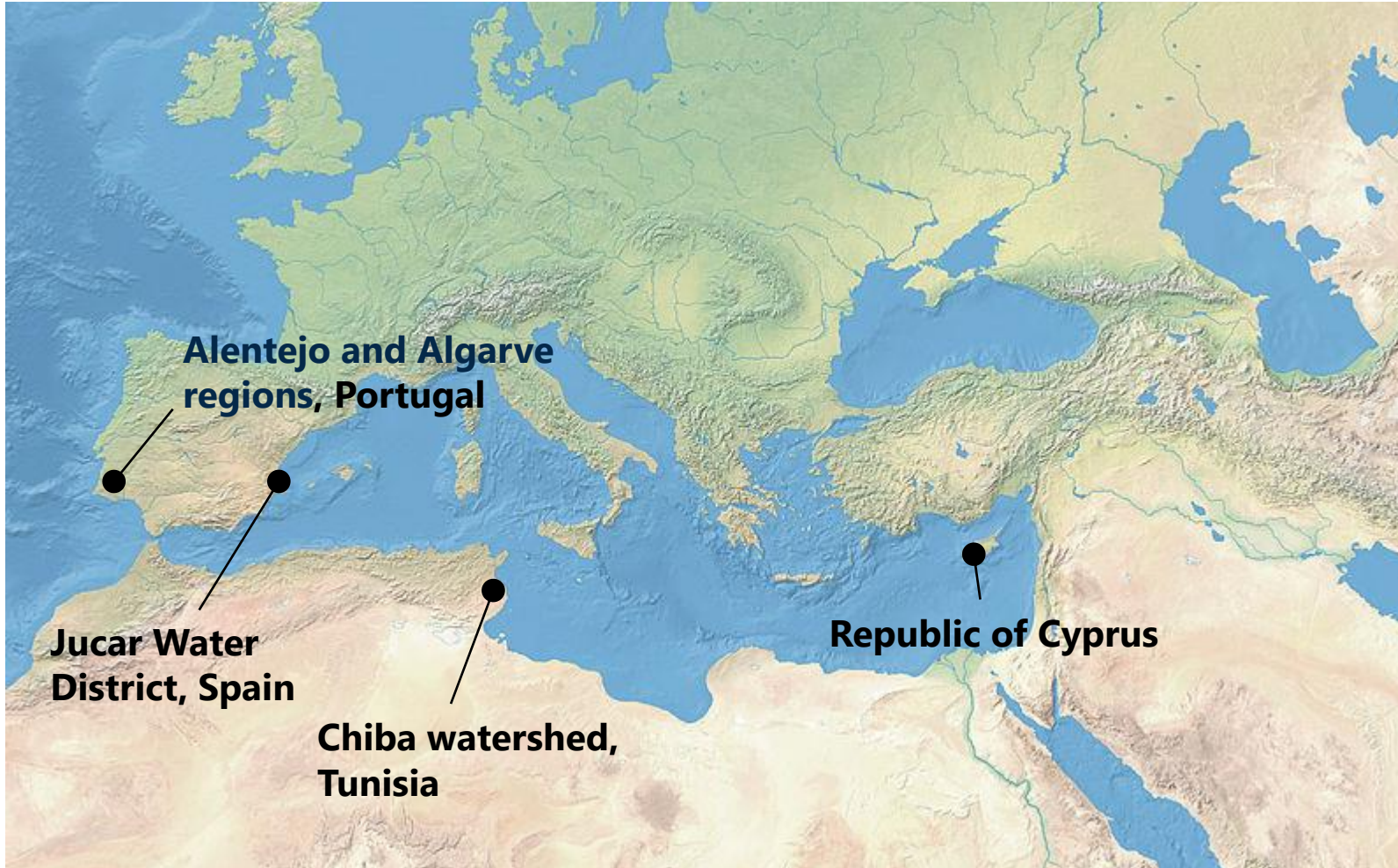


Development of a **general participatory governance framework** at regional level and implementation of **co-created location-specific agreements** for MAR benefits sharing endorsed by cross-sectoral stakeholder groups.



Implementation of a **participative multi-actor approach** for fostering the **engagement of stakeholders** from different societal sectors and actor groups in all stages of project development.





## Project Demonstration Sites

General overview of regional and local demonstration sites of the AGREEMAR project



# AGREEMAR

## Project team



## More information

[www.agreemar.inowas.com](http://www.agreemar.inowas.com)

## Project partners



## Contact

Dr. Constantinos F. Panagiotou  
 Eratosthenes Centre of Excellence  
 Department of Climate and Environment  
[constantinos.panagiotou@eratosthenes.org.cy](mailto:constantinos.panagiotou@eratosthenes.org.cy)

## LAST SLIDE!

### Main tips and good practices

- Choose a strong case site! (data, data, data, data .....
- Stakeholders' engagement: Consult, Inform, Involve, Collaborate
- (Especially for young researchers:) Failure helps you appreciate the journey and enjoy the destination! (this is valid after you take the grant 😊)
- Choose partners that you would like to become friends with! (after all, this is an essential aspect of this journey)

