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Project deliverables

Deliverable #D1.2

Awareness and outreach

Funded by

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AGREEMAR

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

Deliverable #D1.2

Awareness and outreach

Author(s)

Catalin Stefan (TUD), Jana Glass (TUD)

Executive summary

The AGREEMAR project makes use of a variety of communication and dissemination formats to raise awareness and inform different stakeholder groups about its activities and research outcomes. The awareness and outreach channels include on-site and online participative stakeholder workshops at various stages of the project, participation in scientific conferences and workshops, publication of project deliverables, development and consolidation of a general identity image through a modern corporate design that includes also templates, logos, flyers and brochure, website etc. The present report provides an overview of these activities from the start of the project until 30 November 2023.

Work package	Work package 1
Deliverable number & title	D1.2. Awareness and outreach
Partner responsible	Technische Universität Dresden (TUD)
Deliverable author(s)	Catalin Stefan (TUD), Jana Glass (TUD)
Quality assurance	Anika Conrad (adelphi)
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Dissemination level	PU (Public)

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Version	Date	Author	Remarks
V0.1	16.11.2023	Catalin Stefan (TUD)	First version
V1.0	30.11.2023	Catalin Stefan (TUD)	Final version

Abstract

A major focus of the AGREEMAR project is concentrated on participatory approaches involving different groups of stakeholders at all stages of the project. This is particularly important for the development of managed aquifer recharge solutions which cover various sectors of water resources management. While the previous project deliverable D1.1 provided general guidelines for communication, awareness raising and stakeholder engagement, the present report gives an overview of such activities conducted in the first half of the project.

In AGREEMAR, different formats are used for communication and dissemination, wrapped in a modern corporate design that contributes to the consolidation of the general public perception of the project. The activities presented in this report include the onsite and online stakeholder engagement workshops, participation to national and international conferences, invited talks given by consortium members, as well as publication of various materials such as newsletters, peer-reviewed articles, press releases, and reports containing the main research outcomes.

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Awareness and outreach

1 Introduction

AGREEMAR is a research project funded by national funding agencies from five countries under the Partnership for Research and Innovation in the Mediterranean Area (PRIMA). The PRIMA Programme is supported under Horizon 2020 by the European Union's Framework for Research and Innovation. The project proposes an improved and integrated management of water resources centred on optimizing the storage of water in the subsurface with the aim of increasing water security in the Mediterranean region.

1.1 About the AGREEMAR project

The AGREEMAR project will develop an integrated, participative and coordinated methodology to assess and map the feasibility of nature-based groundwater solutions such as managed aquifer recharge (MAR) for climate change adaptation in alignment to the integrated water resources management (IWRM) principles. The project methodology includes several components:

1. development and demonstration of a combined mapping approach that integrates the demand for aquifer-dependent services, a realistic hydrological assessment of conventional and non-conventional water sources for MAR, and a GIS-based analysis for the selection of intrinsic sites suitable for MAR application;
2. development of a general participatory governance framework at regional level based on the results from the feasibility mapping and national policy analysis;
3. 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 systems;
4. implementation of co-created location-specific agreements for MAR benefits sharing, supported by scientific evidence (feasibility maps and modelling) and endorsed by cross-sectoral stakeholder groups;
5. a participative multi-actor approach for fostering the engagement of stakeholders from different societal sectors and actor groups in all stages of project development.

The applicability of AGREEMAR governance framework will be demonstrated on island, regional and local scale at four case study areas from Tunisia, Cyprus, Portugal, and Spain. By selecting regions from EU and non-EU countries on both shores of the Mediterranean basin, AGREEMAR will foster intercultural and multidisciplinary collaboration and transfer between countries. The developed solutions are expected to close the gaps in the hydrological cycle and fulfil optimal water provisions for food security, domestic services and preservation of natural ecosystems in the Mediterranean region.

1.2 Awareness and outreach in AGREEMAR project

1.2.1 Background

In the framework of the AGREEMAR project, the consortium developed and published a general strategy for stakeholder engagement and a detailed plan and recommendations for its implementation during the project and beyond its completion. The AGREEMAR Deliverable D1.1 (Conrad et al., 2022) is built upon a four-step approach developed together with the project partners and refined with relevant stakeholders selected from all four demo regions. The report is based on dialogues during the first missions to the demo regions and includes four pillars: 1) definition of engagement objectives; 2) mapping and prioritisation of key stakeholders; 3) detailed stakeholder analysis; and 4) definition of coherent and tailored engagement formats.

Building up on this knowledge, the present report (AGREEMAR Deliverable 1.2) is a continuation of these efforts by presenting an overview of up-to-date dissemination activities conducted in the project for rising awareness about the measures proposed and increasing the outreach and external communication.

1.2.2 Structure

The report covers most of the engagement formats introduced in the previous report, including: project website, print outreach material (flyers, brochures, roll-ups), social media campaigns (on Twitter and LinkedIn), presentation of project results at national and international conferences, stakeholder expert interviews and participatory workshops, etc. The following chapters include an overview of these activities conducted until 30 November 2023, the deadline for the reporting period of deliverable D1.2.

2 Newsletters

For a targeted dissemination and general communication of project outcomes, the project consortium complied a series of electronic newsletters. Since the start of the project in June 2022, two newsletters were published (one after each six months):

- Newsletter 1, January 2023
- Newsletter 2, July 2023

The newsletters aim to inform the project stakeholders, the scientific community and the general public about the main activities of the project. The information is structured into three categories: "research", "events", and "publications". Additionally, the second newsletter also introduced the newest project team members. The newsletters can be downloaded from the project website at: https://www.agreemar.inowas.com/newsletters/.

2.1 Newsletter no. 1, January 2023

Highlights from the first AGREEMAR newsletter (Figure 1):

- Draft strategy and plan for stakeholder engagement and needs assessment missions in Spain, Portugal and Tunisia
- New participative research methodology for mapping the geospatial feasibility of managed aquifer recharge
- Contributions to two international conferences in Greece and Morocco
- Publication of eight deliverables, one peer-reviewed article, various press articles

Figure 1. Selection of pages from the 1st AGREEMAR Newsletter, January 2023

2.1.1 Events (stakeholder engagements and other activities)

- 24-25 May 2022
  Attending the national meeting on managed recharge of aquifers in Spain
  On 24-25 May 2022, the Spanish partner of the University of Valencia (UPV) attended a national meeting on managed aquifer recharge (MAR), where numerous members of river basin agencies, private companies and different scientific institutions exchanged opinions and experiences about

the technical, legal, social and economic challenges related to managed aquifer recharge of aquifers and joint use of surface and groundwater resources.
Read more

- 27 June 2022
  First meeting between LNEC and general and regional stakeholders in Portugal
  On 27 June 2022, the Portuguese partner Laboratório Nacional de Engenharia Civil (LNEC) had its first meeting with one general stakeholder (ARH-Alentejo: River Basin District Administration of Alentejo) and two regional stakeholders of the region (EDIA: Empresa de Desenvolvimento e Infra-estruturas do Alqueva and AgdA: Águas Públicas do Alentejo (Public Water Works of Alentejo).
  Read more

- 5-8 September 2022
  Project kick-off workshop in Dresden
  Between 5-8 September 2022, representatives from all six partners of the AGREEMAR project met in Dresden for their first official consultations in presence. The meeting was organised by the project coordinator at the main campus of the Technische Universität Dresden, Germany.
  Read more

- 27-30 September 2022
  Participation to the International Conference on "Integrated Groundwater Management of Mediterranean Coastal Aquifers", Chania, Greece
  Our project partner Dr. Constantinos Panagiotou from the ERATOSTHENES Centre of Excellence in Cyprus attended remotely the International Conference on "Integrated Groundwater Management of Mediterranean Coastal Aquifers", from 27 to 30 September 2022.
  Read more

- 3 November 2022
  Needs assessment workshop and meetings with stakeholders from the Júcar Water District in Spain
  On 3 November 2022, the team from the University of Valencia (UPV) of the AGREEMAR project organised a workshop with the main stakeholders of the Spanish demo region.
  Read more

- 18-21 November 2022
  Stakeholder meetings to assess their needs at the project demo region in Portugal
  Between 18-21 November 2022, AGREEMAR project partners LNEC and adelphi held bilateral meetings with key stakeholders of the project demo sites in Portugal including the regional office of the Portuguese Environmental Agency in Alentejo (APA), regional water utilities (EDIA and AgdA-AdP) and a farmer union (the Confederation of Portuguese Farmers, CAP).
  Read more

- 27-30 November 2022
  Participation to the Second Annual Meeting of the Mediterranean Geosciences Union (MedGU-22) in Marrakech, Morocco
  The AGREEMAR project was represented at the 2nd Annual Meeting of the Mediterranean Geosciences Union by Dr. Constantinos Panagiotou with an ePoster entitled: "Multi-sectorial approach for mapping the feasibility of managed aquifer recharge in the Mediterranean region".
  Read more

- 12-16 December 2022
  Assessing the stakeholders' needs and the requirements of the demo sites in Tunisia
  After having successfully conducted needs assessment missions to Spain and Portugal in November, Tunisia was next on the list from 12-16 December 2022. The project team, consisting of INAT, adelphi and TU Dresden met with general (national), regional as well as local stakeholders and visited the demo sites in the Chiba basin on the Cap Bon Peninsula.
  Read more

2.1.2 Research activities

- **Participative research methodology for mapping the geospatial feasibility of managed aquifer recharge**
  The quality and robustness of MAR feasibility maps are highly dependent on the parameters chosen for the multi-criteria decision analysis process. The compilation of these maps is very much biased by the expertise of the author and data availability. The AGREEMAR project aims to contribute to the improvement of the methodology for geo-spatial feasibility mapping by developing a comprehensive database with feasibility criteria that include a multitude of biophysical, technological, social, economic, environmental, hydrological, institutional and financial parameters.
  Read more
- **Four-step approach for active stakeholders' engagement in project activities and beyond**
  In order to develop an appropriate stakeholder engagement strategy and plan at the four project demo sites, a four-step approach was developed by adelphi and proposed to be carried out together with the demo-site coordinators and project-task leaders. This approach will enable the selection of relevant stakeholders for tailored engagement formats. The aim is to define who should and can be involved, how, when and on which topic to best-achieve the project objectives and ensure the sustainable use of the project outcomes.
  Read more

2.2 Newsletter no. 2, July 2023

Highlights from the second AGREEMAR newsletter, July 2023 (Figure 2).

- Assessing the spatial feasibility of MAR implementation at four Mediterranean demo regions
- Initiation and partial implementation of AQUATOOL and MODFLOW models to support decision-making processes
- Stakeholder engagement for needs assessments, co-development and validation of MAR feasibility maps
- Project presentation at conferences and mobility of staff members

Figure 2. Selection of pages from the 2nd AGREEMAR Newsletter, July 2023

2.2.1 Events (stakeholder engagement and other activities)

- 9 February 2023
  AGREEMAR presented by the Cypriot partners at the Cyprus Info Day – PRIMA 2023 event
  On 9 February 2023, the Cypriot partner Dr. Konstantinos Panagiotou presented the AGREEMAR project as invited speaker to the online event "Cyprus Info Day – PRIMA Call 2023".
  Read more

- 6 February – 6 May 2023
  A Master student from Martin-Luther-University Halle-Wittenberg conducted a three-month internship at the Polytechnic University of Valencia
  From 6 February to 6 May 2023, the Institute of Water and Environmental Engineering (IIAMA) at the Polytechnic University of Valencia (UPV) hosted Oskar Bensch, a visiting student from Martin-Luther-University Halle-Wittenberg (MLU) in Germany.
  Read more

- 10 March 2023
  Field visit by LNEC at the MAR site of Comporta wastewater treatment plant and local modelling area
  On 10 March 2023, a team from LNEC conducted a field visit to the Portuguese study area with the main objective of collecting additional information to feed the numerical model to be assembled within the AGREEMAR project.
  Read more

- 14 March 2023
  First meeting of the National Steering Committee of AGREEMAR project in Tunisia
  The first meeting of the National Steering Committee of the AGREEMAR project in Tunisia took place at the National Agronomical Institute of Tunisia on 14 March 2023.
  Read more

- 22 March 2023
  AGREEMAR presented at the 16th Portuguese Water Congress in Lisbon, Portugal
  On 22 March (the World Water Day), the AGREEMAR project was presented by Dr. Teresa Leitão from LNEC at the 16th Portuguese Water Congress in Lisbon, Portugal with a talk entitled "Promoting Managed Aquifer Recharge Implementation in the Mediterranean Area. AGREEMAR Project and Expected Outputs".
  Read more

- 27 February – 13 March 2023
  Syrine Ghannem from Polytechnic University of Valencia conducted a one-month research stay in Tunisia
  From February 27, 2023, to March 13, 2023, Syrine Ghannem, a researcher of the AGREEMAR project at the Polytechnic University of Valencia visited the National Agronomic Institute of Tunisia in order to carry out a stay within the scope of work package 3 of the AGREEMAR project.
  Read more

- 27-31 March 2023
  Assessing the stakeholders' needs and demo site requirements in Cyprus
  The AGREEMAR project reached a significant milestone with its latest needs assessment mission to the project demo site in Cyprus, spanning from 27 to 31 March 2023. During this mission, the project partners adelphi, ERATOSTHENES CoE and TU Dresden engaged in productive discussions with key stakeholders of the water sector and nature conversation.
  Read more

- 17-19 May 2023
  AGREEMAR at the International Training Course on "Conjunctive Management of Surface and Groundwater in the Mediterranean"
  The AGREEMAR project was presented by Prof. Joaquín Andreu during the international Training Course on "Conjunctive Management of Surface and Groundwater in the Mediterranean" organized by UNESCO, between 17-19 May 2023 at the Júcar River Basin Agency, in Valencia, Spain.
  Read more

- 30 June 2023
  Online meeting with Águas do Alentejo (AgdA) to explore the development of an AQUATOOL model
  An online meeting between LNEC, UPV and Águas do Alentejo (AgdA) took place on 30 June 2023 with the aim to discuss the possibility of supporting the decision-making on water management in

Alentejo with the aid of an AQUATOOL model.
Read more

- 13 July 2023
  Validation workshop of the MAR feasibility maps in Tunisia
  On 13 July, the MAR feasibility maps developed by the AGREEMAR team at INAT were validated in a participative workshop attended by representatives of relevant stakeholders in Tunisia.
  Read more

- 27 July 2023
  Validation of the MAR feasibility maps with the Water Authority of Alentejo at the Portuguese demo region
  On 27 July 2023, the MAR feasibility maps developed by the AGREEMAR team at LNEC were discussed and validated in a meeting with the main regional stakeholder at the demo region in Portugal, the Water Authority of Alentejo (APA Alentejo).
  Read more

2.2.2 Research activities

- **Enhancing decision-making for managed aquifer recharge: insights from AQUATOOL models**
  The development and utilization of AQUATOOL models for the different demo regions within the AGREEMAR project offer significant potential for achieving a range of expected outcomes. These outcomes include the optimization of water resource systems by comprehensively characterizing the sources and understanding the relationships between water needs and water availability.

- **Assessing the spatial feasibility of MAR implementation at four Mediterranean demo regions using a GIS-based multi-criteria decision analysis**
  The activities in work package 2 focused on the development of spatial feasibility maps for the implementation of MAR projects in four AGREEMAR demo regions. The maps were compiled following a seven-step methodology that involved participatory activities with regional and national stakeholders from Tunisia, Spain, Portugal and Cyprus. The final feasibility maps were published in the deliverable D2.3 at the end of August 2023 and are available for download on the project website.

- **Numerical groundwater flow modelling using MODFLOW and the web-based platform INOWAS.com**
  Numerical groundwater flow models will be developed in MODFLOW for the validation of spatial feasibility maps with regard to the quantitative evaluation of MAR impact on the groundwater resources at local and regional scale. The models will be implemented on the web-based modelling platform inowas.com to allow an interactive model development and analysis with active stakeholders' participation.

2.3 Newsletter 3 (in preparation)

- 30 August 2023
  Validation workshop of the MAR feasibility maps in Cyprus
  The outcomes of the multi-criteria decision analysis, along with the assumptions/limitations applied to derive the feasibility maps, were discussed with the key stakeholders, particularly members of the Geological Survey and Water Development Department, on 30 August 2023.
  Read more

- 7-8 September 2023
  Project mid-term meeting in Valencia, Spain, between 7-8 September 2023
  Between 7-8 September 2023, the AGREEMAR consortium met in Valencia, Spain for the second annual project meeting. The event included one day of workshops and one day of field trips and was organised by the project partners at the Universitat Politècnica de València (UPV).
  Read more

- 27 September 2023
  Sarah Eisenreich defended her Master's thesis on MAR feasibility mapping in Cyprus

On 27 September 2023 we had the first defence of a Master's within the framework of the AGREEMAR project. Sarah Eisenreich graduated the Master programme on Hydrology at the Department of Hydrosciences of TU Dresden. Her graduation thesis was entitled "A participatory approach for MAR feasibility mapping considering physical and non-physical criteria applied to Cyprus".
Read more

- 16-18 October 2023
  INOWAS web-based modelling platform presented at the International Riverbank Filtration Conference in Dresden
  From 16 to 18 October 2023, the Division of Water Sciences at the Dresden University of Applied Sciences organised the International Riverbank Filtration Conference. The conferences offered a great opportunity to present the latest developments of the web-based groundwater modelling platform INOWAS.
  Read more

- 18 October 2023
  Presentation of the final MAR feasibility maps, the constellation analysis and visit to the physical models with the Water Authority of Alentejo (APA/ARH-Alentejo)
  On 18 October 2023, the final MAR feasibility maps developed by the AGREEMAR team at LNEC (improved after discussion with APA/ARH-Alentejo on 27 July 2023 meeting) were presented to the main regional stakeholder at the demo region in Portugal, the Water Authority of Alentejo (APA/ARH-Alentejo).
  Read more

- 25 October 2023
  National Civil Engineering Award 2023 for Prof. Joaquín Andreu, PI of UPV team
  On 25 October 2023, Prof. Joaquín Andreu, PI of the UPV team in the AGREEMAR project, was honoured with the National Civil Engineering Award 2023, delivered by the Ministry of Transport, Mobility, and Urban Agenda.
  Read more

- 13 November 2023
  Meeting between INAT and the Tunisian Association of Nature and Environment Protection (ATPNE) in Korba, Tunisia
  On 13 November 2023, INAT team met the representatives of the Tunisian Association of Nature and Environment Protection (ATPNE). The NGO has the objective of contributing to nature and environment protection in CapBon peninsula in general and specifically in the Korba region. ATPNE Korba is active in dealing with the biodiversity of Korba lagoon and it is one of the most relevant stakeholders of the AGREEMAR project in Chiba demo site.
  Read more

- 17 November 2023
  Validation of feasibility maps for the Spanish demo region by the Júcar Basin Authority
  On Friday, 17 November 2023, the UPV team of the AGREEMAR project met with the Water Commissary and the Hydrological Planning Office of the Júcar Basin Authority to validate the MAR feasibility maps and their weighting coefficients.
  Read more

- 21 November 2023
  AGREEMAR attended PRIMA Project Day event in Sitges (Barcelona), Spain
  On 21 November 2023, PRIMA Foundation organised a meeting of all projects funded through the PRIMA Call 2021 and 2022 from both Section 1 and Section 2 funding lines. The meeting was organised in Sitges, south of Barcelona, Spain and brought over 70 project coordinators and consortium members with PRIMA Project Officers and members of the PRIMA Secretariat Team.
  Read more

3 Corporate design

3.1 Project website

The website of the AGREEMAR project (https://www.agreemar.inowas.com/) was launched in July 2022 as part of the Work Package 6 "Project management", task 6.2 "External communication and outreach". The website is managed by the project coordinator and WP6 leader, TUD, with content being provided by all members of the consortium (Figure 3).

To facilitate the separation between the general public platform for dissemination and outreach and the internal communication workflow and data management within the consortium, the project website consists of two parts:

1. **Public website:** a platform for communication and dissemination of project results and interactions with project-relevant stakeholders.
2. **Collaborative platform:** an internal workspace accessible only by the project consortium and used to monitor the project progress and share working documents.

A detailed presentation of the website is provided in the project deliverable D6.1 (Stefan, 2022).

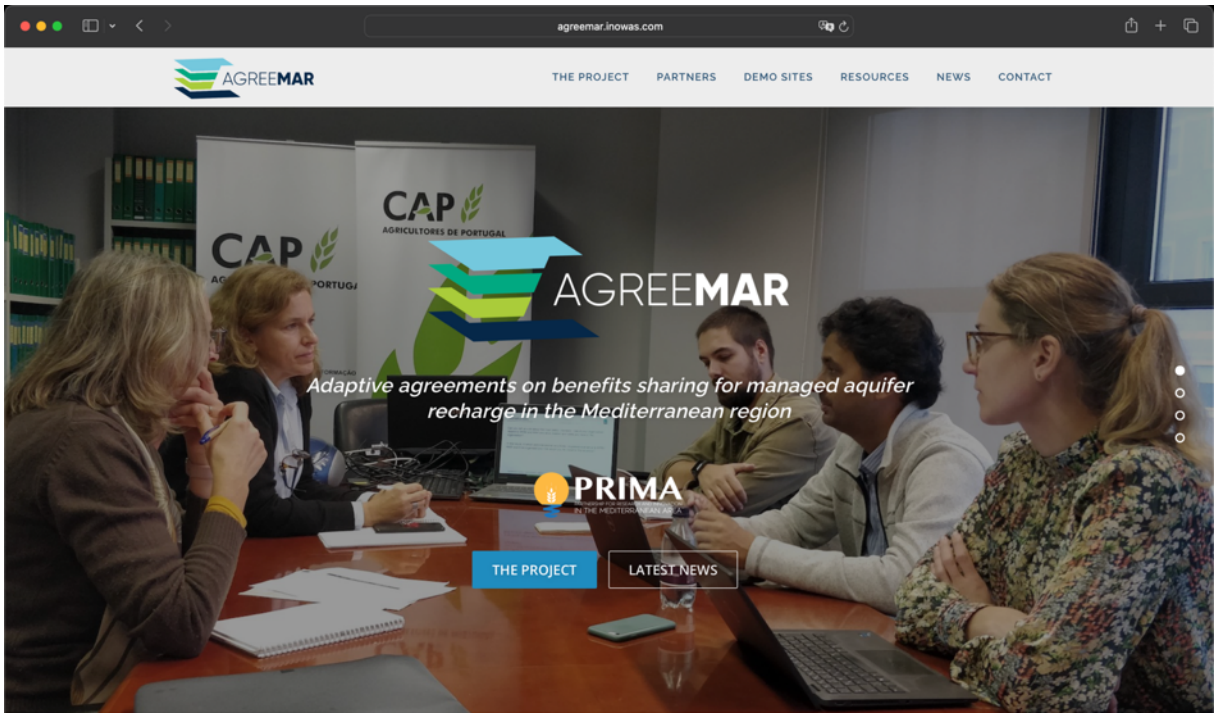

Figure 3. Screenshot from the AGREEMAR project website

3.2 Project logos

A set of graphic logos has been created by the project coordinator to reflect the general character of the AGREEMAR project (Figure 4). The logo uses the graphic theme of multi-layered datasets to illustrate the research methodology based on a multi-criteria decision analysis for MAR feasibility mapping. The logo is available in colours and as black and white versions in multiple graphic file formats (.png, .svg and .eps).

Figure 4. AGREEMAR logo in various colors and formats

The logo is available on the project website: download AGREEMAR logos in all file formats (.png, .svg and .eps).

3.3 Project flyers

The project's objective, research methodology and demo regions are summarised in a project flyer that is used for communication and dissemination activities. The flyer is available in multiple languages (English, French, Portuguese, Spanish, and Greek), reflecting the multi-national character of the project and its demonstration regions (Figure 5 and Figure 6). The flyers can be downloaded in PDF format from the project website at the address: https://www.agreemar.inowas.com/flyer/.

English (PDF) Français (PDF) Português (PDF) Español (PDF) Ελληνική (PDF)

Figure 5. AGREEMAR project flyers available in several languages

Overall goal

The long-term aim of AGREEMAR is to optimise the hydrological balance in Mediterranean countries by developing governance models, management strategies, costs-benefits analyses, technical specifications and simulation tools to optimise the water storage in aquifers, enabling increased resilience to climate change.

Specific objectives

- **To validate**, optimise 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 management 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.

Contact

Project coordinator

Dr. Catalin Stefan
Technische Universität Dresden
Institute of Groundwater Management
Research Group INOWAS

Address

Helmholtzstr. 10
01069 Dresden, Germany
+49 351 463-44144
catalin.stefan@tu-dresden.de
www.agreemar.inowas.com

Project partners

Funding

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Project duration: June 2022 - May 2025.
Project sponsored by:

AGREEMAR
www.agreemar.inowas.com

AGREEMAR

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

PRIMA

Demonstration regions

The project will enable the creation of specific MAR agreements supported by regional feasibility mapping and numerical groundwater modelling at island, regional and local scale.

Alentejo and Algarve regions, PORTUGAL

Increasing water availability and quality by making use of non-conventional water sources for MAR (e.g., flash floods, treated wastewater).
Partner: Laboratório Nacional de Engenharia Civil (LNEC), PORTUGAL

Júcar Water District, SPAIN

Conjunctive use of groundwater and surface water; improving water quality and increased availability of recovered water for irrigation; enabling efficient MAR implementation.
Partner: Universitat Politècnica de València (UPV), SPAIN

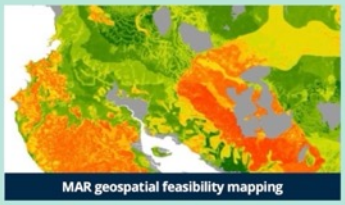
Chiba watershed, TUNISIA

Improving the water quality and increase the availability of recovered water for irrigation; guarantee lifetime duration of MAR schemes by integrated planning.
Partner: Institut National Agronomique de Tunisie (INAT), TUNISIA

Republic of CYPRUS

Increasing the availability of recovered water for irrigation and improved groundwater quality.
Partner: ERATOSTHENES Centre of Excellence, CYPRUS

Research approach



MAR geospatial feasibility mapping

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 through groundwater modelling

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.

Adaptive governance frameworks and agreements

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.

Participative stakeholders' engagement

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.

Figure 6. Content of the AGREEMAR project flyer

3.4 Project roll-up

For dedicated stakeholder engagement activities, a set of two project roll-ups have been designed and made available to project partners. The roll-ups use a template that can be adapted to each specific demo region. Figure 7 presents the roll-up posters used in 2023 for participative stakeholder workshops in Tunisia.

Figure 7. AGREEMAR roll-up posters

3.5 MS Office templates

A set of general templates were designed within the Work package 6 (Project management) and used by the project partners in dissemination and communication activities. This includes MS Power Point templates for general project presentations and internal monthly meetings (Figure 8) and for project reports and deliverables (Figure 9).

Figure 8. Template for MS Power Point presentations

Figure 9. Template for MS Word reports and project deliverables

4 Demo regions brochure

The methodology of the AGREEMAR project is demonstrated at four demo regions in Portugal, Spain, Tunisia and Cyprus (Figure 10). Each case includes a regional demo site (at watershed scale or bigger) and at least one local demo site. A description of these regions was included in a short brochure, comprising information about size, objectives, technical solutions and good practices considered, etc. The brochure was compiled at the request of PRIMA Secretariat and can be made available upon request. At the end of the project, an updated version with results from all work packages will be available on the project website.

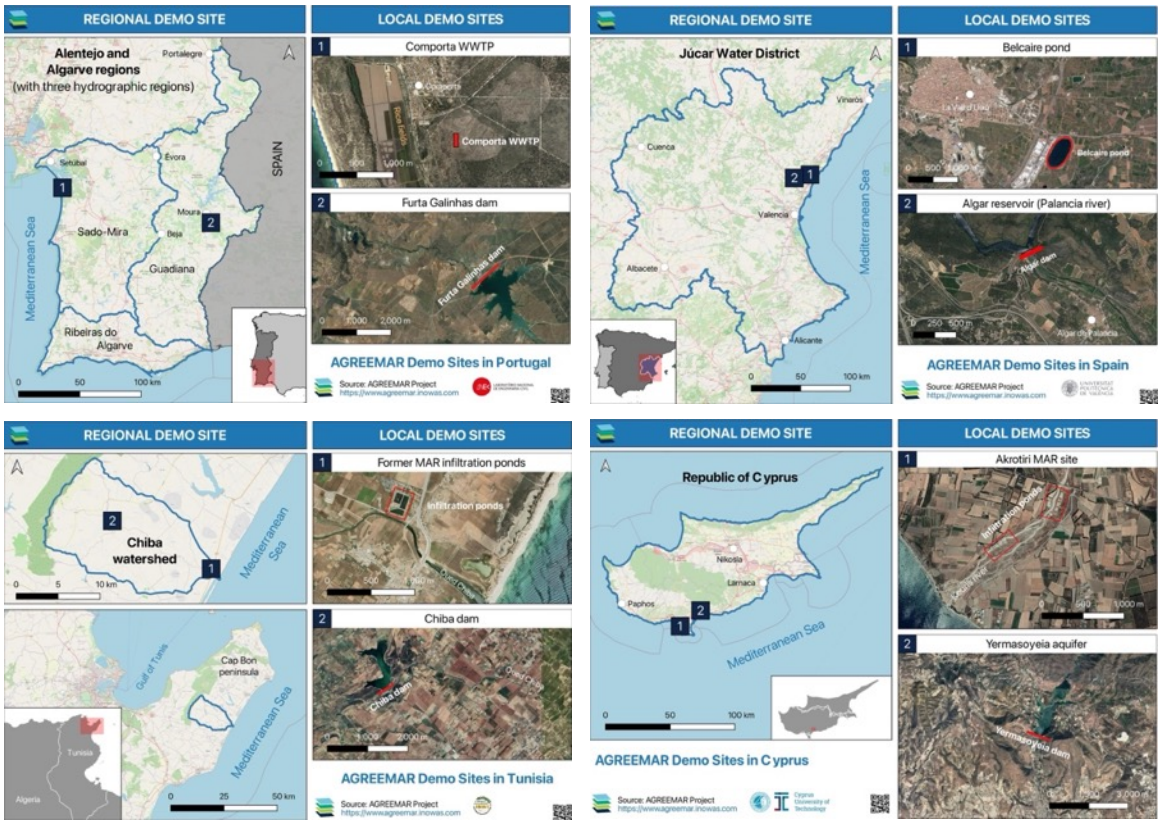


Figure 10. The four demo regions and study sites of the AGREEMAR project

5 Publications

The following sections include the publications, contributions to conferences, invited talks and press articles released during the reporting period (1 June 2022 – 30 November 2023). The updated list of publications can be found on the project website: https://www.agreemar.inowas.com/publications/.

5.1 Journal articles

- Sahuquillo, A., Cassiraga, E., Gómez-Hernández, J.J., Andreu, J., Pulido-Velazquez, M., Pulido-Velazquez, D., Álvarez-Villa, O.D., Estrela, T. (2022) **Management Alternatives of Aquifer Storage, Distribution, and Simulation in Conjunctive Use**. *Water*, 14(15), 2332; https://doi.org/10.3390/w14152332

5.2 Conference papers

- Glass, J., Junghanns, R., Stefan, C. (2023) **The INOWAS groundwater management platform: web-based tools for real-time monitoring and numerical modelling at managed aquifer recharge sites.** Presentation at the International Riverbank Filtration Conference, Dresden, Germany, 16-18 October 2023.
- Chekirbane, A., Panagiotou, C.F., Dorsaf, A., Stefan, C. (2023) **A coupled GIS-MCDA approach to map the feasibility of Managed Aquifer Recharge.** Presentation at the General Assembly of the European Geosciences Union (EGU2023), Vienna, Austria, 23-28 April 2023. https://doi.org/10.5194/egusphere-egu23-8315
- Leitão, T., Martins, T., Oliveira, M., Stefan, C. (2023) **Promoting managed aquifer recharge implementation in the Mediterranean area. The AGREEMAR project and expected outputs.** Presentation at 16th Congresso de Água "Viver com a Água". Lisbon, Portugal, 21-14 March 2023. https://bit.ly/3ndxD5X
- Chkirbene, A., Conrad, A., Leitão, T., Loulli, E., Martins, T., Oliveira, M., Panagiotou, C., Stefan, C. (2022) **Multi-sectorial approach for mapping the feasibility of managed aquifer recharge in the Mediterranean region**. e-Poster presentation at the Annual Meeting of the Mediterranean Geosciences Union (MedGU2022), Marrakesh, Morocco, 27-30 November 2022. https://bit.ly/3wdjt5R.
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5.3 Invited talks

- Panagiotou, C. (2023) **AGREEMAR PRIMA Project: A journey from failure to success.** Invited talk at the online seminar "Cyprus Info Day – PRIMA 2023" organised by the Research and Innovation Foundation of Cyprus. 9 February 2023, online event.

5.4 Press articles

- Reunión del proyecto AGREEMAR para optimizar la gestión de los acuíferos mediterráneos (Engl. AGREEMAR project meeting to optimise the management of Mediterranean aquifers) *RETEMA*, 27.09.2023. http://bit.ly/3MUVqBr
- Projeto PRIMA AgreeMAR: Questionário sobre Gestão da Recarga de Aquíferos (MAR). Newsletter nº 207 (Engl.: Project PRIMA AgreeMAR: Questionnaire on Managed Aquifer Recharge (MAR) *APRH*, 25.11.2022. https://bit.ly/3XM0pbe

- Projeto agreeMAR visita a ETAR da Comporta (Engl.: Project agreeMAR visits the Comporta WWTP) *AgdA – Águas Públicas do Alentejo*, 22.11.2022. https://bit.ly/3j8WaqQ
- Arranca el proyecto europeo Agreemar sobre recarga gestionada de acuíferos (Engl.: European AGREEMAR project on managed aquifer recharge gets underway) *TECNOAQUA*, 17.10.2022. https://bit.ly/3R6iXAn
- PRIMA – Kooperationsprojekt AGREEMAR: Anpassungsfähige Vereinbarungen über die gemeinschaftlichen Vorteile von künstlicher Grundwasseranreicherung im Mittelmeerraum, Teilprojekt 1 (Engl.: PRIMA – AGREEMAR Collaborative Project: Adaptive Agreements for Benefits Sharing of Managed Aquifer Recharge in the Mediterranean, Subproject 1). *Kooperation International*. https://bit.ly/3j7qfHn
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- El IIAMA participa en un proyecto para impulsar la recarga gestionada de acuíferos (Engl.: The IIAMA participates in a project to promote managed aquifer recharge). *iAqua*, 28.09.2022. https://bit.ly/3XrPJyi
- Κέντρο Αριστείας ΕΡΑΤΟΣΘΕΝΗΣ: Χρηματοδότηση ερευνητικού έργου AGREEMAR – PRIMA (Engl.: ERATOSTHENES Centre of Excellence: funding for AGREEMAR – PRIMA research project) *Elemesos*, 16.12.2021. https://bit.ly/3HyxYHV
- ΕΡΑΤΟΣΘΕΝΗΣ: Χρηματοδότηση ερευνητικού έργου AGREEMAR – PRIMA (Engl.: ERATOSTHENES: Funding of AGREEMAR – PRIMA research project) *Paidea-News*, 15.12.2021. https://bit.ly/40hNCyX

5.5 Student theses

- **Sarah Eisenreich**
  A participatory approach for MAR feasibility mapping considering physical and non-physical criteria applied to Cyprus. Supervisors: Catalin Stefan (TUD), Jana Glass (TUD), Konstantinos Panagiotou (ERATOSTHENES CoE), Eleni Loulli (ERATOSTHENES CoE)

6 Project deliverables

The interim results of the project are periodically published in online deliverables (D). Until 30 November 2023, 11 reports were published on the project website: https://www.agreemar.inowas.com/deliverables/.

6.1 Work package 1. Fostering stakeholders' engagement

- **D1.1a Preliminary analysis of project-relevant stakeholders**
  Deliverable D1.1a identifies for each project demo site the key stakeholders at three levels that are significant for the joint development of an overall governance agenda for MAR and its participatory implementation at the local level. In addition, initial assumptions are made about the needs and competences of the identified stakeholders in relation to MAR.
  Download PDF (1.4 MB)
- **D1.1 Stakeholder engagement strategy and plan**
  Deliverable D1.1 provides project partners with tailor-made engagement formats adapted to the needs of the stakeholders, guided in addressing typical engagement challenges and managing conflicts, as well as establishing mechanisms for monitoring and evaluating the engagement progress.
  Download PDF (3.9 MB)
- **D1.2 Awareness and outreach**
  Deliverable D1.2 describes the main activities undertaken in the AGREEMAR project for increasing the awareness on the project and its activities and to disseminate its outcomes to targeted

stakeholders and general public.
Download PDF (6.8 MB)

6.2 Work package 2. MAR feasibility mapping

- **D2.1 Matrix of feasibility criteria for managed aquifer recharge**
  Deliverable D2.1 is dedicated to the compilation of an extensive database containing hydrogeological, geochemical, biophysical, environmental, social, economic feasibility criteria for managed aquifer recharge. The current version of the database can be downloaded from the following address: http://agreemar.webspace.tu-dresden.de/feasibility-criteria/.
  Download PDF (0.9 MB)
- **D2.2 Participative methodology for criteria selection and weighting in MAR site feasibility mapping**
  Deliverable D2.2 is dedicated to the development of a new methodological approach for mapping the geospatial feasibility of managed aquifer recharge applications. The report focuses on the selection and weighting of feasibility criteria and their integration into a GIS-based multi-criteria decision analysis.
  Download PDF (1.1 MB)

6.3 Work package 3. Adaptive governance framework

- **D3.1 Preliminary analysis of indicators and methodologies for decision-making**
  Deliverable D3.1 provides a preliminary analysis of indicators and methodologies for decision-making and highlights the importance of integrated water management and the use of indicators for planning and sustainable exploitation of managed aquifer recharge (MAR) projects.
  Download PDF (2.1 MB)

6.4 Work package 4. Validation through numerical modelling

No deliverables were yet published in work package 4.

6.5 Work package 5. Agreements implementation at local scale

No deliverables were yet published in work package 5.

6.6 Work package 6. Project management

- **D6.1 Project website**
  This report describes the website of the AGREEMAR project. The website was developed by the Research Group INOWAS at Technische Universität Dresden and launched in July 2022. The website serves as central tool for dissemination of project results and external communication. The URL of the website is: https://www.agreemar.inowas.com/.
  Download PDF (6.7 MB)
- **D6.2 Detailed Project Action Plan**
  This report describes the detailed Project Action Plan (PAP) of the AGREEMAR project. It includes the detailed planning of project tasks including sub-tasks, responsible institutions, the table of deliverables and the GANTT chart.
  Download PDF (2.3 MB)
- **D6.3 Data Management Plan (DMP)**
  This document contains the Data Management Plan (DMP) of the AGREEMAR project. The DMP describes the practices adopted for data management according to general guidelines set by the European Commission and in compliance with the Cooperation Agreement signed by the consortium.
  Download PDF (0.4 MB)

- **D6.4a Minutes of kick-off meeting in Dresden**
  This report summarizes the AGREEMAR kick-off meeting that took place between 5-8 September 2022 at the main Campus of Technische Universität Dresden, Germany. The kick-off meeting was divided into four parts: a) Preliminary bilateral workshops, b) Presentations on the main project objectives, working packages and demo sites, c) Three workshops on the project methodologies and d) Field trip on the Elbe River.
  Download PDF (7.8 MB)
- **D6.4b Minutes of mid-term meeting in Valencia**
  This report summarizes the AGREEMAR mid-term meeting that took place on 7 and 8 September 2023 at the main Campus of Universitat Politècnica de València (UPV), Valencia, Spain. The mid-term meeting was divided into two parts: a) Presentations on the progress of project activities, b) Field trip to the Spanish case study sites including meetings with local stakeholders.
  Download PDF (5.9 MB)

7 Social media

7.1 Twitter

The AGREEMAR project is present on Twitter at the following link: https://twitter.com/agreemarPRIMA (Figure 11). The Twitter account is managed by the project coordinator TUD who periodically shares updates from the project and submissions by project partners.

Figure 11. Screenshot of the AGREEMAR Twitter page

7.2 LinkedIn

The website of the AGREEMAR project on LinkedIn is https://www.linkedin.com/company/agreemar/. Periodical posts about the project are posted by the project coordinator, reaching out to a larger community of users (Figure 12).

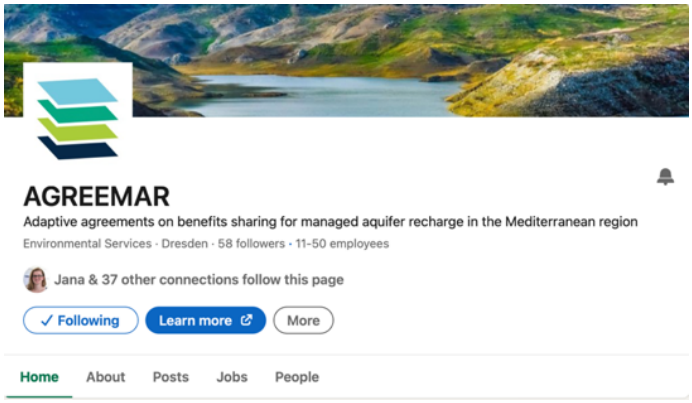

Figure 12. LinkedIn account of the AGREEMAR project

8 Conclusions

The AGREEMAR project makes use of a variety of communication and dissemination formats to raise awareness and inform different target groups about its activities and research outcomes. The awareness and outreach channels include on-site and online participative stakeholder workshops at various stages of the project, participation in scientific conferences and workshops, publication of project deliverables, development and consolidation of a general identity image through a modern corporate design that includes also templates, logos, flyers and brochure, website etc.

9 References

Conrad, A.; Heim, R.; Helling, Leo. 2022. AGREEMAR Deliverable 1.1: Stakeholder engagement strategy and plan. Available online at https://www.agreemar.inowas.com/deliverables.

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Acknowledgement

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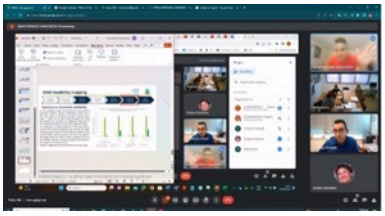
Annex 1. Awareness and outreach activities (selection)

Meeting between INAT and the Tunisian Association of Nature and Environment Protection (ATPNE) in Korba, Tunisia (13.11.2023)

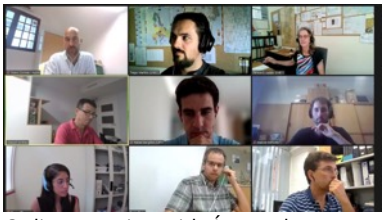
Presentation of the final MAR feasibility maps, the constellation analysis and visit to the physical models with the Water Authority of Alentejo (18.10.2023)



Validation workshop of the MAR feasibility maps in Cyprus (30.08.2023)

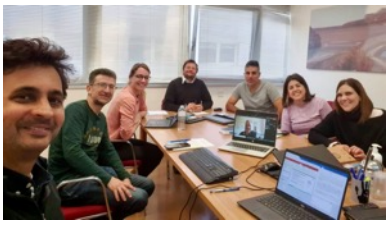
Validation of the MAR feasibility maps with the Water Authority of Alentejo at the Portuguese demo region (27.07.2023)

Validation workshop of the MAR feasibility maps in Tunisia (13.07.2023)



Online meeting with Águas do Alentejo (AgdA) to explore the development of an AQUATOOL model in Portugal (30.06.2023)

AGREEMAR at the International Training Course on “Conjunctive Management of Surface and Groundwater in the Mediterranean” (17-19.05.2023)



Assessing the stakeholder needs and demo site requirements in Cyprus (27-31.03.2023)

AGREEMAR project presented at the 16th Portuguese Water Congress in Lisbon, Portugal (22.03.2023)

Meeting of the Project Steering Committee of AGREEMAR in Tunisia (14.03.2023)

Field visit conducted to Comporta WWTP / MAR site and local modelling area (10.03.2023)

AGREEMAR represented at the MedGU-22 in Marrakech, Morocco (27-30.11.2023)

Assessing the stakeholders' needs and demo site requirements in Tunisia (12-16.12.2022)

Stakeholder meetings to assess their needs and weighting of MAR feasibility criteria at project demo site in Portugal (18-21.11.2022)

Needs assessment workshop and meetings with stakeholders from the Júcar Water District in Spain (03.11.2022)

AGREEMAR Cypriot partners explored opportunities for collaboration with representatives of Open University of Cyprus (12.10.2022)

AGREEMAR at the International Conference on Integrated Groundwater Management of Mediterranean Coastal Aquifers (27-30.09.2022)

Kick-off meeting of the AGREEMAR project in Dresden (5-8.09.2022)

Meeting between LNEC and general and regional stakeholders in Portugal (27.06.2022)

Participation to the national meeting on managed recharge of aquifers in Spain (24-25.05.2022)