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AGREEMAR

Project deliverables

Deliverable #D6.2

Detailed Project Action Plan

Financial support has been provided by PRIMA; a program supported by the European Union

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AGREEMAR

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

Deliverable #D6.2

Detailed Project Action Plan

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Executive summary

This report describes the detailed Project Action Plan (PAP) of the AGREEMAR project. It includes the detailed planning of project tasks including sub-tasks, the table of deliverables and the GANTT chart. The PAP forms the basis for monitoring and controlling the project progress. It allows the project coordinator (Technische Universität Dresden) to evaluate the timely project progress. In addition, the PAP supports all project partners to better understand their responsibilities, promote collaboration in the consortium and evaluate the interlinkages between the work packages.

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v0.1	23.11.2022	Catalin Stefan (TUD)	First draft, including contributions from all partners
v0.2	24.11.2022	Jana Glass (TUD)	Finalisation of first version
v1.0	30.11.2022	Catalin Stefan (TUD)	Final version

Abstract

This report describes the detailed Project Action Plan of the AGREEMAR project. It includes the detailed planning of project tasks including sub-tasks, the table of deliverables and the GANTT chart. The PAP forms the basis for monitoring and controlling the project progress. It allows the project coordinator (Technische Universität Dresden) to evaluate the timely project progress and quickly evaluate the consequences of potential delays to the overall project progress. In addition, the PAP supports all consortium partners to better understand their roles and responsibilities, to promote collaboration among partners and to evaluate the interlinkages between various working packages. The explicit description of activities involving stakeholders' interactions in the project helps to improve and enhance the general stakeholder engagement strategy.

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Detailed Project Action Plan

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 IWRM (integrated water resources management) 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 schemes;
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 at island, regional and local scale on 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.

The project consortium consists of six partners from five different EU and non-EU countires: Technische Universität Dresden (TUD, Germany) coordinates the project. In addition, adelphi research gGmbH (adelphi, Germany), ERATOSTHENES Centre of Excellence (ECoE, Cyprus), Universitat Politecnica de Valencia (UPV, Spain), National Institute of Agronomy, Carthage University (INAT, Tunisia) and Laboratorio Nacional de Engenharia Civil (LNEC, Portugal) are project partners.

1.2 Project structure and objectives

The AGREEMAR project is divided into five thematic work packages (plus WP6 Project management). They constitute the main structure of the project and groups together the main activities to be carried out (Table 1). Each WP has an allocated WP leader who is responsible for the completion of the WP tasks and reporting the achievement of deliverables and milestones.

Table 1. List of work packages (WP) in the AGREEMAR project

No.	Title of work package	Objectives (O)	Lead partner	Duration
WP1	Fostering stakeholders' engagement	• O1.1 To identify roles, responsibilities and the required commitments of stakeholders in MAR systems for the preparation of the MAR agreements. • O1.2 To increase the awareness of stakeholders and local/regional decision makers and the acceptance of the public about MAR and to further develop their capacities. • O1.3 To develop and follow a participatory approach in order to stimulate the involvement of relevant stakeholders from the early project stages of design up to the implementation, generating ownership for the project outcomes.	adelphi	01.06.2022 31.05.2025
WP2	MAR feasibility mapping	• O2.1 To develop and validate a participative methodology for the delineation of areas that are potentially feasible for the application of MAR • O2.2 To apply the mapping methodology developed in the project to the project demonstration regions	ECoE	01.06.2022 31.08.2023
WP3	Adaptive governance framework	• O3.1 Incorporate indicators and operating rules in the draft agreements to facilitate decision making • O3.2 Define a general draft governance framework for MAR, applicable to the Mediterranean region • O3.3 Identify specific requirements for setting up regional draft agreements tailored to the four project case studies	UPV	01.06.2022 21.01.2024
WP4	Validation through numerical modelling	• O4.1 To validate the suitability of selected areas for implementation of MAR schemes using a participative, web-based modelling approach • O4.2 To assess the impact of MAR on the local water budget as a scientific basis for the negotiation of MAR agreements	TUD	01.01.2023 31.11.2024
WP5	Agreements implementa-tion at local scale	• O5.1 To conclude fitting MAR agreements and reinforcing their mandate within the local communities for specific MAR systems • O5.2 To establish follow-up committees for the respective agreements to ensure the sustainability of the just and efficient benefit sharing	adelphi	01.03.2024 31.05.2025
WP6	Project coordination and manage-ment	• O6.1 To fulfill the grant agreement with the funding agencies • O6.2 To ensure best possible project performance, including internal and external communication • O6.3 To successfully steer the consortium in compliance with the consortium agreement	TUD	01.06.2022 31.05.2025

2 Detailed project planning

Based on the general project proposal and considering the specific objectives, milestones, deliverables and WPs structure, a detailed description of the tasks to be undertaken in the project was provided for each WP (Table 2). The list is not exhaustive nor final, small changes and improvements being possible anytime during the project life-cycle. Nevertheless, the list provides the coordinator with a general guideline for monitoring the progress of the project and supports the consortium partners to better understand the roles, synergies and interlinkages between different components of the project. The specific activities with direct involvement of stakeholders are labelled with the symbol ℹ️.

Table 2. Detailed description of project tasks

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
WP1	Fostering stakeholders' engagement	T1.1	adelphi	Detailed needs assessment and stakeholder analysis	a) Identify and map stakeholder groups related to project results (e.g. enablers, researchers, information providers, practitioners) b) Identify and map specific demo site stakeholders for each group c) Assess initial competences, roles and needs regarding MAR d) Development of mission concept and questionnaire for needs assessment e) Collection of criteria for stakeholder analysis f) Detailed stakeholder analysis and needs assessments supported by stakeholder dialogues and workshops at demo sites	The results of the preliminary stakeholder analysis (T1.1a-c) will be published in D1.1a (former M1.1); the results of T1.1d will be published in ;each step will be jointly elaborated or validated by demo site partners.
		T1.2	adelphi	Elaboration of Dissemination & Communication Strategy and Plan (DCSP)	a) Develop methodology for stakeholder analysis and needs assessment b) Categorise key stakeholders for each demo site in terms of interests in and influence on/role regarding AGREEMAR project outcomes based on the results drawn from the demo site missions c) Derive stakeholder specific strategies and activities for engagement	The methodology applied will be published in M1.2 , the results of which will follow with deliverable D1.1.
		T1.3	TUD	Elaboration of awareness and outreach material	a) Development and management of project website, development of project corporate design (including logo, templates for reports, project deliverables, MS PowerPoint presentations, flyers and brochures, etc.), creation of social media accounts for the project (Twitter, LinkedIn, ResearchGate etc.)	
		T1.4	adelphi	Development and implementation of Final DCSP	a) Apply and refine engagement strategy throughout the course of the project as part of other WPs (e.g. information sessions, surveys for consultation, participation in online seminars, co-designing of simulation scenarios)	A final engagement strategy will emerge, valid beyond the end of the project.
WP2	MAR feasibility mapping	T2.1	ECoE	Compilation of indicator matrix	a) Determine the draft structure of the feasibility criteria matrix b) Conduct literature survey to collect information needed to characterize the feasibility of managed aquifer recharge based on biophysical, technological, social, economic, environmental, hydrological, institutional and financial parameters c) Incorporate the collected information into the feasibility criteria matrix according to the proposed structure d) Calibrate and validate the feasibility criteria matrix through an iterative process that involve consultations with consortium partners and interviews with external MAR experts	The methodology applied for the compilation of MAR feasibility criteria will be published in deliverable D2.1. The criteria database will be continuously updated during the project life-

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
					e) Further improve the database through continuous engagement with the scientific community by using a dedicated online questionnaires and workshops f) Regularly update the database with suggestions and feedback received from stakeholders and the wider MAR community	cycle. The actual version and the link to the online questionnaire are available at https://agreemar.inowas.com/feasibility-criteria/.
		T2.2	ECoE	Development of stakeholder-adapted criteria weighting system	a) Literature review to analyse existing criteria weightning systems; understand their limitations and identify knowledge gaps b) Develop a scoring methodology to assess the relevance of non-physical criteria based on MAR objectives and following the three IWRM guiding principles c) Develop a methodology for the selection and ranking of physical criteria based on their impact on non-physical criteria d) Determine a formula to calculate the weighting coefficients for physical criteria based on the feedback from the AGREEMAR Consortium e) Determine a process for filtering the general matrix of physical criteria (T2.1) according to MAR objective f) Determine an approach for validating/confirming/improving the selection in stakeholders workshops g) Determine a participative weighting for calculating the weighting coefficients for selected h) Validated physical criteria based on the feedback from the stakeholders i) Determine a formula for calculating the final rating/weighting of the selected physical criteria by coupling the feedback from AGREEMAR Consortium and stakeholders	Steps T2.1a to T2.1c are jointly implemented by ECoE, LNEC, INAT, TUD in collaboration with all consortium partners. External experts and stakeholders from project demo regions are involved in the implementation of T2.2e to T2.2h Outcomes from T2.2 will be published in deliverable D2.2.
		T2.3	INAT	Mapping the demand for aquifer-dependent services	a) Every selected criteria related to the demand for aquifer dependent services is displayed as spatial data under GIS (raster data). Temporal or seasonal variability is also needed b) The selected ccriteria will be standardized in a unique scale (No demand / Low demand / Moderate demand / Demand / High demand) c) The selected criteria will be ponderated using weighs determined by T2.2 and contributions from stakeholders d) Generate the map of the demand for aquifer-dependent services using GIS (weighed sum of all criteria rasters using raster calculator) or through the INOWAS platform: https://inowas.com/tools/t05-gis-mcda/	Spatial and seasonal data of the selected water demand criteria should be provided by every demo site owner (special output from UPV through basin management models is expected). Outcome from T2.2 is needed as well contribution from

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
						LNEC, ECoE, and UPV is required.
		T2.4	INAT	Mapping of water availability	a) Provide spatio-temporal data of every selected water availability criteria b) The selected criteria will be standardized in a unique availability scale (Unavailable / Low available / Moderately available / Available / Highly available) c) Assign weigths for the selected criteria using outputs of T2.2 and contributions from stakeholders d) Generate the water availability map using GIS (weighed sum of criteria rasters) or via the INOWAS platform: https://inowas.com/tools/t05-gis-mcda/	Spatial and seasonal data of the selected water availability criteria should be provided by every demo site owner (special output from UPV through basin management models is expected). Criteria weighs are needed from T2.2 Contribution from LNEC, ECoE, and UPV is required
		T2.5	INAT	Mapping the intrinsic site suitability for MAR	a) Provide spatial data of the screened criteria related to the intrinsic site suitability for MAR b) Standardize the selected criteria in unique suitability scale (Unsuitable / Low suitable / Moderately suitable / Suitable / Highly suitable) c) Assign weigths for the selected criteria using outputs of T2.2 and contributions from stakeholders d) Generate the water availability map using GIS (weighed sum of criteria rasters) or via the INOWAS platform: https://inowas.com/tools/t05-gis-mcda/	Georeferenced data of the selected criteria related to the intrinsic site suitability for MAR should be provided by every demo site owner. Output from T2.2 is needed to weight the selected criteria. Contribution from LNEC, ECoE, and UPV is required.
		T2.6	INAT	Validation of MAR feasibility map through stakeholders	a) Special site constraints (also linked to non-physical criteria) should be identified and mapped b) Global weighs of the three thematic maps (demand, availability and intrinsic) should be determined through stakeholder interaction c) Generate the MAR feasibility map using GIS (weighed sum of the the the thematics). Feasibility may vary through time (since water demand and availability may vary from one season to another) d) Hold a stakeholder workshop to present, discuss and validate the final MAR feasibility map	The generated MAR feasibility map should be discussed and validated with stakeholders (contribution from adelphi is required).

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
WP3	Adaptive governance framework	T3.1	UPV	Analysis of indicators and methodologies for improved water governance	a) Literature review of the different methodologies and indicators for a better integrated water management and water governance. b) Integrate the gathered information and propose a methodology for the planning and management of aquifer recharge applications.	
		T3.2	TUD	Development of online software tools supporting the decision making	a) Further developments and adaptation of AQUATOOL software to match requirements at the demo regions b) Conceptualisation and web-based implemention of a decission support tool for the selection and weightning of criteria for feasibility mapping c) Improvements and further development of web-based groundwater modelling platform INOWAS (www.inowas.com) according requirements of demo regions d) Potential integration of a MAR serious game as support tool for decision making and conceptualisation of local MAR agreements	T3.2a implemented by UPV (UPV will subcontract some specific IT tasks to adapt AQUATOOL to the objectives of the project and the requirements of the study sites). T3.2b will use input from deliverables D2.1 and D2.2. T3.2d to be decided during the project in collaboration with adelphi and UPV.
		T3.3	UPV	Drafting the general governance framework for MAR	a) Conduct a workshop with stakeholders to gain an understanding of the actual situation, their expectations and to prompt them to get involved in the agreements development b) Reports of the need assessments and national legislations of each case study c) Proposal of indicators of the effects of MAR on water demands and the environment d) Definition of operating rules to optimize the conjunctive use of surface, groundwater and non-conventional resources in water resource systems e) Drafting a general governance framework for MAR and integrated water management	Contributions from adelphi, LNEC, ECoE and INAT are required for the sub-tasks a) and b). Contributions from TUD and adelphi are required for the sub-task e).
		T3.4	UPV	Regional stakeholder consultations for agreement development	a) Hold bilateral meetings with regional stakeholders for development of draft agreements b) Consult the existing models and regulations for each case study c) Analyze the general governance framework elaborated in T3.3 to adapt it to each case study	Contributions from LNEC, ECoE and INAT are required for all the sub-tasks in the PT, CY and TN case studies. Contributions from adelphi are required for the sub-tasks a) and c).

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
		T3.5	UPV	Drafting four regional agreements for case study areas	a) Bilateral meetings of UPV, TUD and adelphi with LNEC, ECoE and INAT in January 2023 to address needs assessments, national legislations, DSS of water resources systems, planning and management recommendations, and agreements tailored to the case studies b) Development of basin management models of the water resources systems for each case study in AQUATOOL c) Testing different strategies of conjunctive use of groundwater, surface water and non-conventional water sources for climate change adaptation and mitigation in each case study d) Assessmenet of the effect of the MAR on water demands and environmental aspects in each case study e) Improvement of GIS feasibility maps for each tested strategy in each case study based on the results of AQUATOOL f) Elaboration of planning and management recommendations adapted to each case study g) Drafting agreements tailored to the case studies	Contributions from LNEC, ECoE and INAT are required for all the sub-tasks in the PT, CY and TN case studies. Contributions from TUD and adelphi are required for the sub-tasks a).
WP4	Validation through numerical modelling	T4.1	TUD	Stakeholders consultations for refining the modelling objectives	a) Consult on refining the specific modelling objectives taking into account the main social and environmental challenges affecting local water use (e.g., use of water resilient crops or adaptation of irrigation methods, increase of industrial water usage with industry benefits, etc.) and the results of the feasibility mapping (WP2) → Final decision for promising areas for MAR verification b) Co-design of simulation scenarios and model concept c) Data collection for numerical MODFLOW model setup	Stakeholder consultations take place together with "Validation of feasibility map" (WP2)
		T4.2	TUD	Development of conceptual model scenarios for selected case studies	a) Development of conceptual model for the selected case study sites b) Additional data collection for numerical MODFLOW model setup (list provided by TUD, dependent on the conceptual model of the case study sites) c) Setup of regional groundwater flow model for case study sites representing the current status (business-as-usual approach) on the web-based INOWAS platform (base model) d) Calibration and validation of base model with the help of observation data (if available)	
		T4.3	TUD	Simulation of adaptive MAR scenarios at local and basin scale	a) Simulation of modelling scenarios taking into account e.g. different MAR methods, operational scenarios, management options or social and environmental challenges affecting local water availability at the various case study sites	

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
		T4.4	TUD	Analysis of model results and collaborative updates with stakeholders consultations	a) Preparation and analysis of preliminary model results b) Presentation and discussion of model results together with local stakeholders c) Collaborative update to the developed scenarios d) Incorporation of feedback from stakeholders into the scenario analysis and preparation of final model results e) Output: D4.1: Final numerical and analytical models representing various MAR scenarios at the selected case study sites	Workshop with stakeholders (together with WP5 Governance Framework and training/capacity building), original planned dates: PT: 04.2024 CY: 06.2024 SP: 07.2024 TN: 09.2024
		T4.5	LNEC	Elaboration of technical case study briefs for MAR infrastructure	a) Compilation of the results obtained in the previous tasks, namely T4.4. b) Development of case study briefs with guiding instructions for the most adequate MAR infrastructures and operation intructions (e.g. water volumes, continuous/intermitent operation, etc.). A case study brief, in the format of a standardised factsheet, will be developed for each case study area. These documents, with up to 5 pages, will contain the objective, summary of feasibility mapping procedures and results, numerical model details - both from AQUATOOL [if applicable] and MODFLOW -, stakeholders' inputs and feedback on the most adequate MAR infrastructure and summary results of explored scenarios.	Providing stakeholders with clear and structured information on future opportunities of implementation incorporating results from WP2 (Feasibility map), WP3 (AQUATOOL), WP4 (MODFLOW) within each of the study area, (deliverable D4.2)
WP5	Agreements implementa-tion at local scale	T5.1	adelphi	Co-participative adaptation of regional agreements to local needs	a) Develop general methodology for preparing local agreements based on the assessed needs from the stakeholders, the existing local agreements for water management, the principles of the framework and the regional agreements from WP3 and literature review b) Evaluate the applicability of the regional agreements to the specific local demo sites and select the sites together with local project partner and consultation of stakeholders c) Detailed assessment of the four selected (potential) local MAR sites against various criteria such as costs and benefits, beneficiaries, responsible MAR operators and supporters, required approvals, operating rules, water quality and recovery objectives, infiltration and abstraction patterns to ensure sustainability and climate resilience of the MAR system d) Bilateral co-creation workshops with key stakeholders to collect ideas for local agreements based on prior project results, such as the feasibility maps, the regional agreements developed in WP3 and results of numerical models developed in WP4	The results will be published in a draft of D5.1; whereby the minutes of the stakeholder workshops (T5.1d) will be available in M5.1.

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
					e) Prepare draft local agreements by bringing together the various ideas, feedback and needs received from key stakeholders	
		T5.2	adelphi	Training and capacity building to enhance coherence among local stakeholders	a) Develop training outline based on needs communicated by the stakeholders b) Recruite trainers (preferably within the project team) c) Collect and develop training materials using the results an lessons learned from the previous WPs d) Organise at least one training at each demo site	T5.2 will be conducted in close collaboration and supported by respective WP leaders and thematic experts; the results will be published in training reports with the materials attached
		T5.3	adelphi	Organisation of civil assemblies for adopting local MAR agreements	a) Pre-discuss draft local agreements with key stakeholders (if considered necessary, consents will be obtained beforehand) and identify potential governance ownership of the local agreement b) Develop concept and materials for civil assemblies in cooperation with key stakeholders potentially governing the agreements c) Pre-discuss with local partner possible sensitivities and appoint a local neutral mediator for conflict resolution if felt necessary (e.g. farmers associations) d) Organise civil assemblies bringing together all stakeholders involved/impacted and benefitting of the (potential) MAR site preferably conducted by governing stakeholder e) Facilitate the finalisation of the local agreements by governing stakeholder	The results will be published in D5.1.
		T5.4	UPV	Creation of follow-up committees for sustainable exploitation	a) Contact skateholders and experts to invite them to be part of the follow-up committees. One committee will be created for each study site. UPV, LNEC, INAT and ECoE will coordinate the Spanish, Portuguese, Tunisian and Cypriot committees, respectively b) Organize a virtual or face-to-face meetings to discuss and propose polifcy briefs and technical guidelines in each study site c) Elaboration of summary reports of the meetings by UPV, LNEC, INAT and ECoE for the Spanish, Portuguese, Tunisian and Cypriot case studies, respectively d) Integrate the four reports into a toolbox with policy briefs and technical guidelines	Contributions from LNEC, ECoE and INAT are required for all the sub-tasks in the PT, CY and TN case studies.
WP6	Project coordination and manage-ment	T6.1	TUD	Project administration and internal communication	a) General project coordination and administration: prepare detailed plan for project activities, evaluate the development of research methodologies and outcomes b) Facilitate and mediate internal communication with and between partners: foster dialog among partners, organise and chair montly consortium meetings (online),	Activities implemented by Project Coordinator (TUD) in close agreement with the Project Steering

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
					prepare project annual meetings, apply the best-possible approach for resolving possible conflicts between partners c) Monitor project progress and reporting: oversee timely delivery of work package deliverables and milestones, schedule activities and adjustments to progress agenda	Board composed of WP leaders.
		T6.2	TUD	External communication and outreach	a) Communication with PRIMA Officer and project reporting (management of project reporting on MEL platform, general communication with the PRIMA project officer) b) Management, maintenance and updates on project website, publication of project outcomes on social media channels, presentation of project progress at international conferences, etc. c) Dissemination of project outcomes to scientific community and general public through dedicated news articles, newsletters, press releases, social media, project website etc. d) Project promotion through publication and dissemination of project outcomes via workshops, conferences, symposia and political forums (together with partners)	Implementation of activities developed by T1.1 – T1.3 in WP1 (in collaboration with adelphi and WP leaders).
		T6.3	TUD	Risk management and contingency planning	a) Risk identification and assessment throughout the entire life-cycle of the project based on analysis of deliverable status and WP schedules and scopes b) Continuous risk monitoring though regular communication with WP leaders (if new risks are identified, they are analysed and added to the original list) c) Risk mitigation and contingency planning: assisting WP leaders to apply appropriate mitigation measures to situations related to their WP activities; responsible to execute mitigation activities for risks affecting the general project implementation	A table with potential risks identified during proposal writing phase is maintained by Project Coordinator and updated with new unforseen risks and risk-mitigation measures.
		T6.4	TUD	Data management	a) Generate a preliminary Data Managemement Plan (DMP) for data collected and generated by the project, including: • Concept for metadata management (scope of data collection/generation and relation to the project, source of data, data utility etc.) • Compliance to FAIR principles for making data findable, openly accessible, interoperable, and increase data re-use (naming conventions, keywords, versioning system, metadata allocation, storage and documentation, conventions and restrictive use, enabling exchange among institutions, licensing and re-usability, conditions for data access by third-parties etc.) • Safeguarding adequate data security (including recovery and transfer) b) Continuously DMP updating over the course of the project wherever significant changes arise (i.e., new data, changes in consortium, external factors).	The preliminary Data Management Plan (DMP) of the AGREEMAR project will be published as deliverable D6.3.

WP no.	WP name	Task no.	Lead partner	Task name	Sub-tasks and implementation steps	Comments
					c) Assisting project partners with implementation of data management policies and monitoring data collection, processing and generation	
		T6.5	TUD	Organization and implementation of annual project meetings	a) Preparation of project kick-off meeting in Dresden, September 2022: meeting agenda, presentation of AGREEMAR project, assistance to project workshops, field trip organisation, writing and publishing the minutes of the meeting b) Preparation of project interim meeting in Valencia, December 2023: assisting project partner UPV with meeting preparation, drafting meeting agenda, writing and publishing the minutes of the meeting c) Preparation of project final meeting in Limassol, March 2025: assisting project partner ECoE with meeting preparation, drafting meeting agenda, writing and publishing the minutes of the meeting	The reports of the three project meetings will be published on project website as deliverable D6.4 (a - c) – see https://agreemar.inowas.com/deliverables/.

Activity involving the engagement of stakeholders

The results of individual tasks will be published in form of project deliverables according to the general project proposal (Table 3). The link between the tasks and deliverables is provided in the detailed project plan (Table 2) in the column "Comments". The deadlines for the publication of project deliveables is given in months passed since the official project start (01.06.2022) and also in calendar dates.

Table 3. List of project deliverables

No.	Name of deliverable	WP	Lead partner	Type*	Date (month and calendar date)	
D1.1	First Dissemination and Communication Strategy and Plan (DCSP)	WP1	adelphi	Report	M8	31.01.2023
D1.2	Awareness and outreach campaign	WP1	TUD	Media action	M18	30.11.2023
D1.3	Final DCSP	WP1	adelphi	Report	M36	31.05.2025
D2.1	Matrix of feasibility indicators	WP2	ECoE	Database	M5	31.10.2022
D2.2	Stakeholder-adapted criteria weighting system	WP2	ECoE	Technical scheme	M6	30.11.2022
D2.3	Validated feasibility map for each case study area	WP2	INAT	Report	M15	31.08.2023
D3.1	Preliminary analysis of indicators and methodologies for decision making	WP3	UPV	Report	M14	31.07.2023
D3.2	General governance framework agreement	WP3	UPV	Report	M25	31.01.2024
D3.3	Set of four regional draft agreements for project case studies	WP3	UPV	Report	M25	31.01.2024
D4.1	Analytical and numerical models for different MAR scenarios	WP4	TUD	Numerical models	M27	31.08.2024
D4.2	Technical case study briefs on the specification of selected MAR infrastructure	WP4	LNEC	Report	M30	30.11.2024
D5.1	Locally adapted MAR agreements	WP5	adelphi	Report	M32	31.01.2025
D5.2	Capacity development workshops and trainings courses	WP5	adelphi	Workshop	M30	31.12.2024
D5.3	Toolbox with policy briefs and guidelines	WP5	UPV	Report	M36	31.05.2025
D6.1	Project website	WP6	TUD	Website	M3	31.08.2022
D6.2	Detailed Project Action Plan (PAP)	WP6	TUD	Report	M6	30.11.2022
D6.3	Updated Data Management Plan (DMP)	WP6	TUD	Report	M6	30.11.2022
D6.4	Minutes of project meetings (D6.4a kick-off, D6.4b interim and D5.4c final)	WP6	TUD	Report	M35	30.04.2025

3 GANTT chart

The GANTT chart (Table 4) gives an overview of the time schedule of the project including the tasks of each WP and the responsible partner. The project deliverables are labelled with the letter 'D', the milestones with 'M' while 'W' represents activities with stakeholders' involvement (workshops, meetings, online surveys, etc.). The duration and delivery deadlines for milestones and reports are fixed while the exact dates for stakeholder workshops are used for general orientation only. If delays or other changes occurr during the project, the GANTT chart will be adjusted accordingly, in agreement with the PRIMA Officer and the national funding agencies, if required.

Table 4. AGREEMAR GANTT chart

	Lead	Year 1												Year 2												Year 3											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
		2022							2023												2024											2025				
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
WP1. Fostering stakeholders engagement	adelphi			M1.1			M1.2																													
Task 1.1 Detailed needs assessment and stakeholder analysis	adelphi			W		W																														
Task 1.2 Elaboration of Dissemination & Communication Strategy and Plan (DCSP)	adelphi								D1.1																												
Task 1.3 Elaboration of awareness and outreach material	TUD																		D1.2																		
Task 1.4 Development and implementation of Final DCSP	adelphi																																				D1.3
WP2. MAR feasibility mapping	ECoE					M2.1										M2.2																					
Task 2.1 Compilation of indicator matrix	ECoE					D2.1																														
Task 2.2 Development of stakeholder-adapted criteria weighting system	ECoE					W	D2.2																														
Task 2.3 Mapping the demand for aquifer-dependent services	INAT																																				
Task 2.4 Mapping of water availability	INAT																																				
Task 2.5 Mapping the intrinsic site suitability for MAR	INAT																																				
Task 2.6 Validation of MAR feasibility map through stakeholders	INAT														W	D2.3																					
WP3. Adaptive governance framework	UPV																							M3.1,	M3.2												
Task 3.1 Analysis of indicators and methodologies for improved water governance	UPV														D3.1																						
Task 3.2 Development of online software tools supporting the decision making	TUD																																				
Task 3.3 Drafting the general governance framework for MAR	UPV																									D3.2											
Task 3.4 Regional stakeholder consultations for agreement development	UPV									W									W																		
Task 3.5 Drafting four regional agreements for case study areas	UPV																									D3.3											
WP4. Validation through numerical modelling	TUD																											M4.1			M4.2						
Task 4.1 Stakeholders consultations for refining the modelling objectives	TUD									W																											
Task 4.2 Development of conceptual model scenarios for selected case studies	TUD																																				
Task 4.3 Simulation of adaptive MAR scenarios at local and basin scale	TUD																																				
Task 4.4 Analysis of model results and collaborative updates with stakeholders consultations	TUD																							W				D4.1									
Task 4.5 Elaboration of technical case study briefs for MAR infrastructure	LNEC																														D4.2						
WP5. Agreements implementation at local scale	adelphi																															M5.2	M5.1				
Task 5.1 Co-participative adaptation of regional agreements to local needs	adelphi																							W						W		D5.1				
Task 5.2 Training and capacity building to enhance coherence among local stakeholders	adelphi																												W		W	D5.2					
Task 5.3 Organisation of civil assemblies for adopting local MAR agreements	adelphi																												W			W					
Task 5.4 Creation of follow-up committees for sustainable exploitation	UPV																																		W		D5.3
WP6. Project management and coordination	TUD			M6.1																																M6.2	
Task 6.1 Project administration and internal communication	TUD						D6.2																														
Task 6.2 External communication and outreach	TUD			D6.1																																	
Task 6.3 Risk management and contingency planning	TUD			W							W					W						W					W									W
Task 6.4 Data management	TUD						D6.3																														
Task 6.5 Organization and implementation of annual project meetings	TUD		C		D6.4															C	D6.4													C	D6.4	

M – milestones; D – deliverables; W - workshops

4 Conclusions

The detailed Project Action Plan includes the planning of project tasks (Table 2), the table of deliverables (Table 3) and the GANTT chart (Table 4). The Project Action Plan forms the basis for monitoring and controlling the project progress. It allows the project coordinator (TUD) to evaluate the timely project progress and quickly estimate the consequences caused by potential delays to the overall project progress. In addition, the Project Action Plan is valuable for all project partners to clarify responsibilities and evaluate the interlinkages between various working packages and project partners within one WP fostering collaboration. The inclusion of stakeholder engagement in the sub-project tasks helps to improve and enhance the stakeholder engagement strategy (WP1, M1.2).

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