AWARD
Alternative Water Resources and Deliberation processes to renew water supply strategic planning

DELIVERABLE N°5.1

Harmonized Demo Cases & Transversal Interest Group Implementation Guidelines Including a Stakeholder Mapping

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Disclaimer

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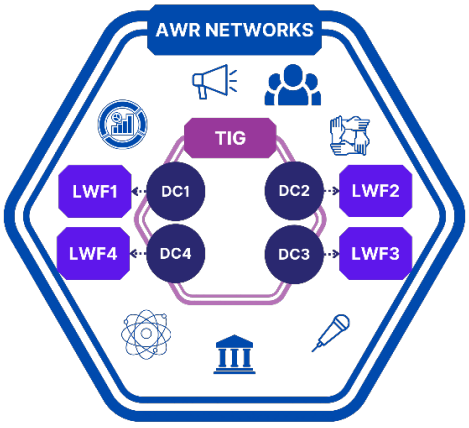
Project Consortium

EXECUTIVE SUMMARY

The Harmonized Pilot Site Interest Groups Implementation Guidelines Including a Stakeholder Mapping is a crucial deliverable under the AWARD project, which aims to integrate Alternative Water Resources (AWR) into strategic water supply planning. The deliverable is part of Work Package 5 (WP5), which focuses on the harmonized and transversal management of four Demo Cases (DCs) across different regions in Europe: Romania, Italy, Cyprus, and Spain. These demo cases will experiment with AWR solutions, addressing local challenges while contributing to the overall goals of the AWARD project.

The primary objectives of this deliverable are to provide a structured methodology for the management of the Demo Cases and to outline the roles of stakeholders involved in each of them. The document presents the different AWRD communities, such as Demo cases, Transversal Interest Groups (TIGs), Local Water Forums (LWF) band AWARD networks, which are designed to engage stakeholders at different levels—from water association to water suppliers, researchers, public authorities, technology companies and small and medium enterprise. These groups are intended to foster collaboration, share knowledge, and address technical and social challenges related to the adoption of AWR solutions (see figure).

Figure a: AWARD' communities



To achieve these objectives, the document provides a comprehensive stakeholder mapping, identifying key actors, their roles, and needs in each Demo Case. It also sets out a meeting structure that includes monthly WP5 meetings, Demo Case-specific meetings, and larger project-level gatherings like the General Assembly. These meetings are critical for ensuring regular communication, monitoring progress, and aligning the activities of the Demo Cases with other work packages in the project.

The document further emphasizes the importance of governance, planning, and stakeholder engagement in ensuring the successful implementation of AWR solutions. By involving a broad spectrum of stakeholders and maintaining a structured workflow between the Demo Cases and the project's various work packages, AWARD aims to create scalable and sustainable water management solutions that can be adapted across different European contexts.

In summary, this deliverable lays out the foundational guidelines for the collaborative management of the AWARD Demo Cases, ensuring that stakeholder involvement, technical solutions, and social engagement are harmonized to achieve the project's goals. The document provides a roadmap for integrating AWR into water supply planning while addressing the diverse needs and challenges of the involved regions.

DOCUMENT INFORMATION

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Task	Task 5.1: Name of the task
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Co-author(s)	Eleni NYKTARI (NTUA), Ciprian NANU (BDG), Florentina NANU (BDG), Eduard INTERWIES (INTERSUS), Jean-Marc DOUGUET (UP-Saclay), Marwan SHAMEKH (OiEau)
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REVISION HISTORY

Version	Date	Who	What
V1	31/05/2024	Natacha AMORSI (OiEau)	
V2	28/08/2024	Natacha AMORSI (OiEau)	Completion of the demo case profiles
V	18/09/2024	Natacha AMORSI (OiEau)	Finalisation of the section 5, collaborative work with Eleni NYKTARI (NTUA), Ciprian NANU (BDG), Florentina NANU (BDG), Eduard INTERWIES (INTERSUS), Jean-Marc DOUGUET (UVSQ) and Marwan SHAMEKH (OiEau)
VF	25/09/2024	Natacha AMORSI (OiEau)	

RELATED DELIVERABLES AND CONNECTION AMONG WORKPACKAGES

- *D6.1 Communication and dissemination plan (OiEau, Public, month 6) to align stakeholders' personas and mapping*
- *The deliverable will support WP2, WP3 and WP4 to frame their activities related to Demo Cases' stakeholders*

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LIST OF ACRONYMS

AWR	Alternative Water Resources
DC	Demo Case
DE	Digital ecosystem
CA	Consortium Agreement
EC	European Commission
GA	Grant Agreement
SH	Stakeholder
TIG	Transversal Interest Group
WP	Work Package
LWF	Local Water Forum
INBO	International Network of Basins Organisation
KER	Key Exploitable Results

1 INTRODUCTION

AWARD is a three-year project that has started in January 2024. It brings together 14 partners with different expertise from 7 countries aiming at renewing water supply strategic planning with the integration of Alternative Water resources through deliberation process. As explained in AWARD description of activities, AWARD aims at mainstreaming AWR through multi-level communities of practice where stakeholders from different sectors can build trust and recognize their mutual accountability towards AWR solutions (AWARD specific objective n°3).

1.1 AWARD and Work Package n°5 overview

Work Package n°5 (WP5) led by NTUA aims at experimenting AWRs solutions in 4 Demo Cases (DC) for strategic planning. WP5 is divided into two main tasks. This report is related to the first one, Task 5.1 *Harmonised and transversal management of AWARD Demo cases.* This task is led by OiEau and particularly involves the following partners: AIMEN, NTUA, IRIDRA, PSB, UTCB, CAP, CMM, CETAQUA and VIAQUA (gathering each DC leader and local partners), for the whole duration of the project.

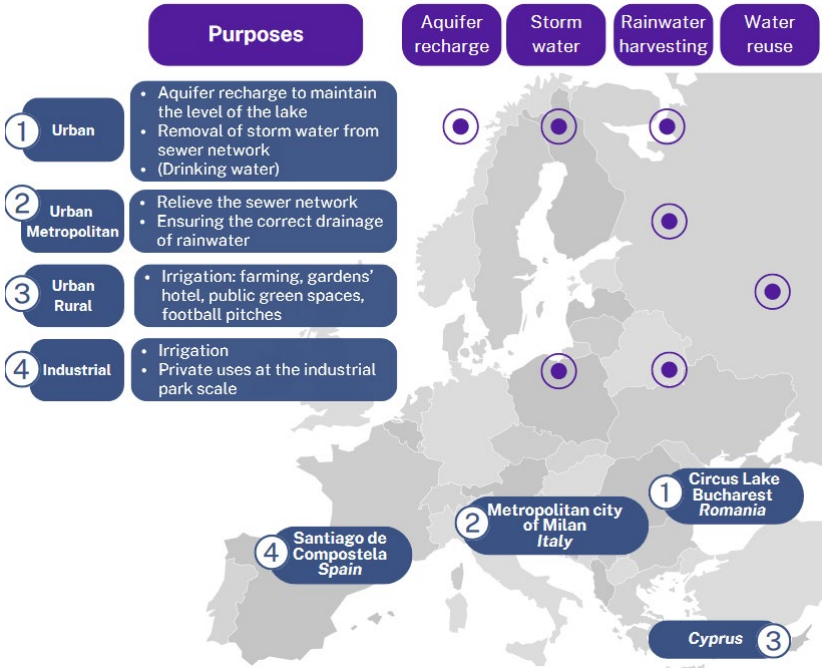


Figure 1: AWARD Demo Cases Map

Task 5.1 aims at supporting AWARD 4 DC through the different phases of their multi-level implementation by:

- Supporting and monitoring each DC (during WP5 monthly meetings, led by NTUA),
- Supporting the workflow between the DC and the other WPs (during WP5 monthly meetings, and projects' meetings such the General Assembly (GA), Touch point meeting (virtual General Assembly),
- Providing opportunities for regular exchanges among stakeholders of the 5 demo cases through the Transversal Interest Groups (facilitated by NTUA during WP5 monthly meeting and annual meetings planned at each to General Assembly meeting),
- Assessing the possibility of Local Water Forum creation in relation with WP2[1] focusing on socio political support and engagement for AWR integration in water supply planning?

[1] WP2 deals with Socio political support and engagement for AWRs management

Deliverable D5.1 aims at providing guidance for the implementation of these communities embedded in the DC.

1.2 Structure of the report

Section 1 focuses on DC presentation. It describes the four DC in different regions, detailing their challenges, stakeholders, and expected outcomes within the AWARD project. Each demo case is presented with specific information about location, stakeholders, and solutions to be tested.

Section 2 emphasis the Stakeholder characteristics of the DC. It provides a comprehensive overview of the profiles of stakeholders involved in the demo cases, including water suppliers, public authorities, water association, researchers & academia; water technology companies and small and medium enterprises.

Section 3 relates to the creation of AWARD stakeholders mapping. It provides a two layers approach (i) one proposing a conceptual map crossing needs in terms of evidence-based solution and AWR solutions' providers (ii) the procedure to gather information from the Demo cases stakeholders.

Section 4 presents AWARD Communities: The report explains the creation of different communities within the project, including individual DC communities, Transversal Interest Group, Local Water Forums, and AWR networks. These communities are crucial for ensuring engagement and collaboration among stakeholders.

Section 4 sets the overall approach for DC management. It outlines governance principles, meeting plans, preliminary plan to discuss specific topics with DC and the coordination required to harmonize the management of demo cases across various work packages.

Final the conclusion summarizes the overall objectives achieved and the ongoing efforts to ensure alignment and cooperation between demo cases and work packages.

2 DEMO CASES PRESENTATION

This section focusses on AWARD 4 Demo Cases (DC) and present for each of them their location, challenges and needs, the stakeholders, the added value and expectations in AWARD's solutions.

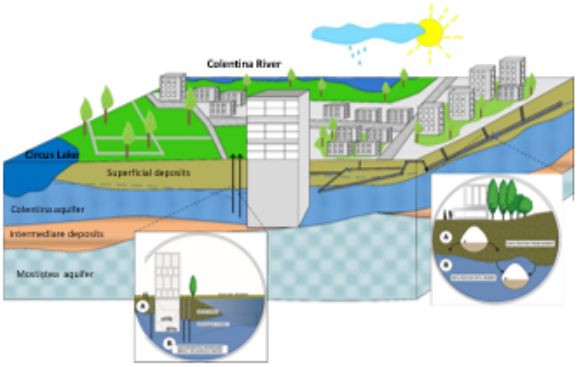
2.1 Demo Case #1: Circus Lake, urban park Bucharest, Romania

Demo Case 1 is led by UTCB with the support of BDG. The following picture is the DC#1 poster prepared by UTCB.

Table 1: Demo Case 1 Description

LOCATION

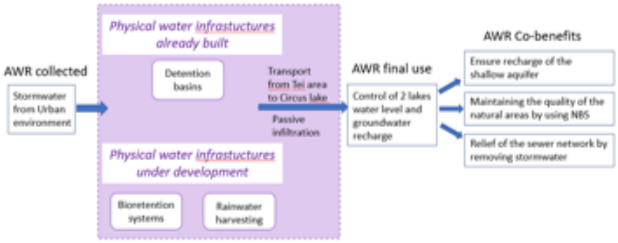
- **Bucharest city, 2nd District - Tei neighborhood**



CHALLENGES & NEEDS

The decrease of the groundwater level in this urban area and therefore of the water level of Circus Lake as a consequence of several hydrological and hydraulic factors that influence the zonal hydrological balance:

- climate changes revealed by the reduction of precipitation,
- drastic reduction of water distribution system losses,
- temporary and permanent dewatering systems (including illegal activities).



WHO ARE THE STAKEHOLDERS?

Stakeholder	Role	Needs
Water Operator of Bucharest city - ApaNova	• Facilitate implementation of distinct NBS • Support with data and information on the sewer/drainage area infrastructure	• Accurate NBS implementation for Tei urban area • Diminishing the storm water volumes from the sewer network
Lakes and Parks Administration of Bucharest city	• Facilitate the AWR solutions implementation	• A steady water lake level and ecological status of the lake • Providing an example of Good Practice • Learning NBS solutions implementation
Tei **Community Group** (District Community of Residents)	• Observation on the Circus Lake water level and its ecological state • Advertising the Circus Lake demo case among residents of Bucharest and beyond	• A steady lake water level and ecological status of the lake • Providing an example of Good Practice
Bucharest 2nd district **Municipality administration**	• Advertising the Circus Lake demo case among the urban planners and decision makers in Bucharest districts and Romanian cities	• A steady lake water level and ecological status of the lake
National Water Administration "Romanian Waters"	• Advertising the Circus Lake demo case among the Romanian specialists and cities	• Increased experience in AWR implementation • Optimized urban planning considering AWR and water balance in cities

IN CONTACT WITH

- **Water Operator** of Bucharest city ApaNova
- **Lakes and Parks Administration** of Bucharest city
- Tei **Community Group** (District Community of Residents)
- **National Water Administration** "Romanian Waters"

ADDED VALUE FOR AWARD

- **Capture stormwater** from the urban environment in the neighborhood (Tei area) and **reuse it** to control the water level in the lake as a reliable ecological solution that support the aquifer recharge while maintaining the quality natural environment.
- **Strategic planning** exercise expanded to the entire Tei urban area - District 2 of Bucharest city. Developing a management framework for natural water quantity/quality in urban areas, defining sets of parameters, methods and thresholds for quantity/quality assessment and monitoring of natural water potentially contaminated by anthropogenic water.
- **Assess the performances of NBS treatments** within specific contexts of potentially contaminated anthropogenic water, on the basis of tests and mass balances and design optimized management of storm water.

EXPECTATIONS FROM AWARD SOLUTIONS

- **Demonstrate** the effective uses of various alternative water sources, focusing on the aquifer recharge, storm water, rainwater harvesting and water reuse.
- **Control** the urban groundwater level in the Tei urban area, and implicitly Circus Lake Park water level by applying reliable AWRs solutions.
- **Replicate** the urban area water-balance analysis to support AWRs solutions in Bucharest as well as in other cities

2.2 Demo Case #2: Metropolitan City of Milan, Italy

Demo Case 2 is led by IRIDRA, the local partners are CMM, CAP. Table 2 is DC#2 poster prepared by the partners highlighting the location, challenges and needs, stakeholders and relations with AWARD projects.

Table 2: Demo Case 2 Description

LOCATION

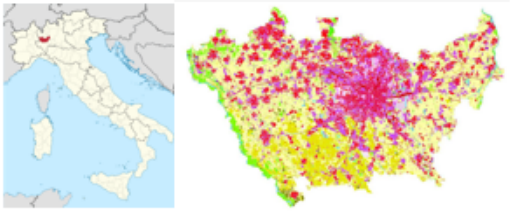


Fig. 1: Soil use in Milan metropolitan area (133 Municipalities)

The Metropolitan City of Milan (CMM) is a **local public authority** that governs the vastest metropolitan urban area in Italy. It includes the City of Milan and other 132 Municipalities, representing a functional area of more than 5 million people (3.6 million inhabitants).
The Metropolitan City of Milan is among the most densely populated urban areas in Europe with a density of about 2,038 inhabitants/km2 for a total of 3.4 million inhabitants and a demographic structure composed of 22% over 64 years old. Its territory is about 1600 Km2 distributed over 132 Municipalities, and is about 41% formed by build-up areas and infrastructures (Fig, 1 red), 50% agricultural areas (Fig. 2 yellow) and only 8% woodlands (Fig.3 green).

CHALLENGES & NEEDS

- Collect data on water quality and quantity to start an open evidence based conversation with Public Authorities and Water utilities on strategic planning with NBS
- Engage citizens in NBS caring
- Implement communication and dissemination activities to deliver multi-level tailored new knowledge on NBS benefits and co-benefits
- Strengthen stakeholders network (public/private) to mainstream NBS solutions
- Explore nature-based solutions to solve flooding due to storm water linked to heavy rain, to reduce heat islands and to increase biodiversity (studies in continuity to the project Life Metro Adapt)

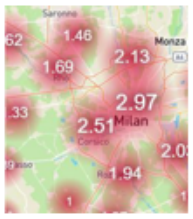


Fig. 2: Night-time Thermal anomalies (C°)

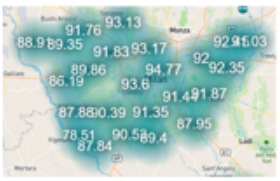


Fig. 3: Potential water run-off for wet soil (%)

WHO ARE THE STAKEHOLDERS?

Stakeholder (Organization name /Profile)	Role	Needs
CMM	Public Authority	Multi-level tailored new knowledge with the aim of involving them in planning and realizing new AWRs solutions
133 Municipalities	Public Authority	
Lombardy Region	Public Authority	
ATO	Water Authority	
CAP	Water Utility	
MM	Water Utility	
ERSAF/ARPA	Public Authority	
Citizens		
Environmental Associations		

IN CONTACT WITH

- Institutions
- Water Authority
- Water Utility

ADDED VALUE FOR AWARD

- Agenda 2030 as metropolitan strategy to realize NBS - Suds (Metropolitan Sponge City Plan)
- Territorial Cluster strong and technically skilled, engaged at the institutional level
- CMM plays as a coordinating institution among public Authorities in the metropolitan area and as an institutional function (authorizing role)
- Analyse, study and monitor Suds in urban environment with low cost monitoring
- 92 Suds interventions planned and under implementation (in 33 Municipalities) to study

EXPECTATIONS FROM AWARD SOLUTIONS

- Study and address climate change issues in metropolitan urban area, in particular local flooding runoff and urban heat islands
- Evaluate with local data NBS benefits and co-benefits, through multipurpose simplified low cost monitoring solutions
- Involve citizens with innovative tools to increase the acceptance and knowledge of NBS technology and its impacts
- Support public decision makers in integrating alternative water supply technologies into their strategic plans

2.3 Demo case #3: Cyprus

Demo Case 3 is led by NTUA, the local partners CMM and CAP. Table 3 is DC#3 poster prepared by the partners highlighting the location, challenges and needs, stakeholders and relations with AWARD.

Table 3: Demo Case 3 Description

LOCATION

Municipal Wastewater

CHALLENGES & NEEDS

Challenges

- Water scarcity (minimized water reservoirs)
- Dealing with variable flow rates
- High seasonal water demand
- Engage citizens, authorities and businesses in water reuse practices
- Reduce energy consumption
- Control of algae production

Needs

- ✓ Minimise water stress
- ✓ Valorisation of municipal wastewater
- ✓ Integrating digital technologies
- ✓ Production of Class A reclaimed water
- ✓ Agricultural production support
- ✓ Touristic activities support

WHO ARE THE STAKEHOLDERS?

Stakeholder	Role	Needs
Water Development Department (Ministry of Agriculture, Rural Development and Environment	Decision making in water management	Expertise support on decision making
Sewerage Boards (Nicosia, Limassol, Paphos, Larnaca, Paralimni- Agia Napa)	Decision making in water management/WW TP operators	Optimisation of existing AWRs technologies Support on decision making
Paralimni Municipality, Agia Napa Municipality, Other municipalities	Decision making in water management	Expertise support on decision making
Hotel Businesses	End Users	Increase knowledge on AWRs and acceptance
Farmers	End Users	Increase knowledge on AWRs and acceptance

IN CONTACT WITH

- Sewerage Board of Limassol
- Sewerage Board of Paralimni- Agia Napa (partner)
- Paralimni Municipality

ADDED VALUE FOR AWARD

- DC#3 will develop advanced operation of wastewater treatment technologies consolidating digital monitoring technologies
- Energy consumption monitoring and minimisation within the WWTP of Paralimni
- Involvement of different categories of local stakeholders (public authorities, end users, citizens)
- Assess the AWR solution implemented for water reuse in agriculture and public spaces

EXPECTATIONS FROM AWARD SOLUTIONS

- Demonstrate the effectiveness of the AWR solution (production of high-quality reclaimed water and reuse in agricultural activities and public spaces
- DC#3 will assess based on the reuse technologies the impact of the decentralized systems as the most suitable approach for the deployment of AWRs from technical and economical perspectives.
- Increase the acceptance level of reclaimed water for agricultural and urban/peri-urban use
- Support the public authorities in the engaging process of AWRs technologies in order to optimise water management and sustainability.

2.4 Demo case #4: Santiago de Compostela, Spain

Demo Case 4 is led by AIMEN, the local partners are CETAQUA and VIAQUA. Table 4 is DC#4 poster prepared by the partners highlighting the location, challenges and needs, stakeholders and relations with AWARD.

Table 4 Demo Case 4 Description

LOCATION

SANTIAGO DE COMPOSTELA (SPAIN)

SIONLLA INDUSTRIAL PARK

TREATMENT WETLANDS & SUDS

CHALLENGES & NEEDS

- ⇨ Collect and treat rain and storm water with Nature Based solutions
- ⇨ Efficient operation of Treatment Wetland and Sustainable drainage systems
- ⇨ Provide Quality water for reuse:
  - Elimination suspended solids, organic matter and nutrients
  - Reductions oils, fats and Hydrocarbons (PAHs)
  - Removal of microplastics
  - Diminution emerging organic compounds
  - Free of pathogens
- ⇨ Testing the reclaimed water in real application by support of administrations
- ⇨ Engage stakeholders and increase social acceptance

WHO ARE THE STAKEHOLDERS?

Stakeholder Organization name /Profile	Role	Needs
Augas Galicia	Water legislator	AWR with guarantees. Control pollution to water bodies
Galician Public Health service	Administration (health)	Water with sanitary quality
Council	Local Administrator. Water responsible	AWR for provide most high-quality water
Industrial Park Association	Management of the Industrial park	Continuous improving of Industrial park in different aspects
Neighbors' associations	Representative of society	Enhancements in the industrial park area

IN CONTACT WITH

- Augas de Galicia
- Local Administration (City Council Santiago de Compostela)
- Galician public health services

ADDED VALUE FOR AWARD

- Demonstration polluted Water Runoff from an Industrial park could be used as AWR.
- Green infrastructure designed for improve treatment of pollutants and produce high quality water for reusing.
- Use of Nature-based Solutions → Environmental and social benefits.

EXPECTATIONS FROM AWARD SOLUTIONS

- High quality water as product prepared to be used in the industrial park
- Social acceptance of the possibility of rainwater harvesting even in industrial parks.
- Collaboration by the administration to re-use treated storm and rainwater and demonstrate its utility.

3 OVERVIEW OF DEMO CASES STAKEHOLDERS' PROFILES

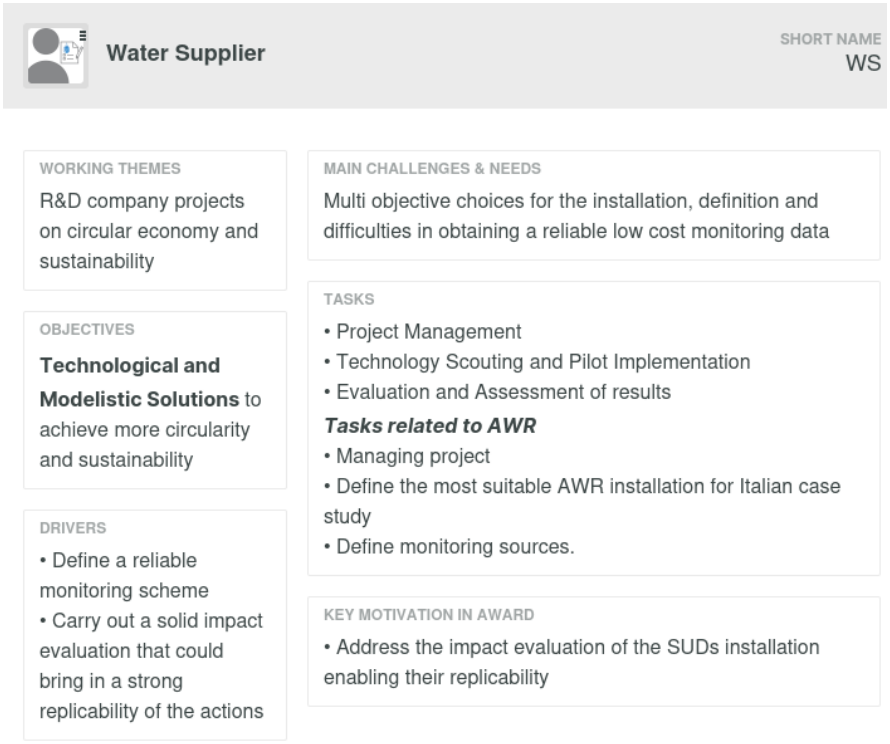
In order to understand the influence and power among stakeholders in DC and also with the aim to widen the DC communities and later on in the LWF, the development of AWARD stakeholders mapping has started in collaboration with WP6 (Impact maximisation). A series of survey with partners has helped to create AWARD personas highlighting the key characteristics of the stakeholders' profiles[2].

3.1 Key characteristics of AWARD stakeholders

At that stage water suppliers, public authorities, water associations, researchers, water technology company and Small and Medium Enterprise have been characterized. The following sections present each of them.

3.2 Water suppliers' characteristics

Table 5: Water Suppliers' characteristics



[2] Detailed in D6.1 Communication and Dissemination Plan

3.3 Public Authorities' characteristics

Table 6: Public Authorities' characteristics

Public Authority

SHORT NAME
PA

WORKING THEMES
- Sustainable development applied to urban and peri-urban areas
- Climate and climatological justice
- Sustainable water cycle management

OBJECTIVES

Project Management and Effectiveness:
- Managing projects with greater environmental and cultural impact
- Make sustainable development actions more cost-effective and functional
- Be more effective

DRIVERS

Importance of AWARD results

MAIN CHALLENGES & NEEDS
- Time Management and Resources
- Communication and understanding
- Stakeholder Engagement

TASKS

Communication and Networking:
- Understanding how sustainable development is communicated
- Have a stronger network

Tasks related to AWR

Policy Review and Social Engagement
- Examination of local policies and regulations
- Enhancing social awareness and acceptance of AWR
- Integration of Metropolitan Urban Agenda with water policy recommendations

Experience Exchange and Monitoring
- Selection of NBS-WT solutions for cost-effective analysis
- Monitoring water quantity, quality, amenity, urban heat island, and biodiversity
- Expansion of monitoring studies to include new NBS systems
- Implementation of citizen science activities for SuDS facility maintenance and biodiversity assessment

Awareness and Stakeholder Engagement • Mapping local stakeholders and target groups
- Providing training materials for AWR awareness
- Implementing awareness-raising campaigns for citizens and stakeholders

KEY MOTIVATION IN AWARD
- Enhanced communication tools
- Expanded network
- Insight into transformative effects of sustainable water management

3.4 Water Association's characteristics

Table 7: Water Association's characteristics

Water Association — SHORT NAME: WA

WORKING THEMES

- Water Quality and quantity management
- Water Knowledge Sharing Water
- Development and Associated Risks

Aligned with the French National Water Plan and the Regional Water Plans for Occitanie and Provence-Alpes-Côte d'Azur Regions

MAIN CHALLENGES & NEEDS

Acceptance and Adoption:

- Social & societal acceptance
- Economic models for AWR
- Technical acceptance of innovations

Outreach and Engagement: wide audience

Networking and Project Development :

- Connect people in order to create an innovative project
- Find a demonstrator

OBJECTIVES

Economic Development: Enhance economic development and job creation through innovation and commercialization for climate adaptation.

Learning and Collaboration: Foster our network of members within a given territory.

Development and Innovation:

- Assist in the growth of SMEs.
- Support innovation within SMEs.
- Facilitate the development of collaborative innovation projects.

Innovative Project

Emergence: Stimulate the emergence of innovative projects to contribute to economic development.

TASKS

Support for Innovative R&D Projects and Processes:

- Support, review, and label innovative R&D projects from companies and research organizations
- Push innovation processes through working groups, technical days, networking events
- Support SMEs in the commercialization of their solutions

Promotion of SME Solutions and Ecosystem Growth:

- Promote SMEs' individual and joint/collective solutions
- Increase Aqua-Valley Cluster ecosystem
- Supporting our companies in developing innovative projects
- Helping our members to go international
- Help our members develop their skills

Collaboration and Networking: Federate companies and labs, create spaces for exchanges, organize meetings, stimulate innovation

Tasks related to AWRs:

•Support and Encouragement for AWR (Advanced Water Recycling) Innovation

•Communication and Dissemination for AWARD Project

•Information Transmission and Networking

DRIVERS

Scientific and Technical Expertise: The scientific and technical know-how of our 250 members

Education and Communication:

- Help decision-makers better understand AWR
- Help to popularize communication to make new solutions more understandable

Relationship Management

KEY MOTIVATION IN AWARD

AWR Project Feasibility Demonstration

- Comprehensive demonstration of AWR project feasibility • Consideration of technical, social, societal, economic, and environmental aspects
- Mitigation of associated risks

Decision Triggering Document - Clear, concise, and visual document to prompt rapid and effective decisions.

Public Decision Maker Engagement: Vulgarization to promote AWR initiatives

3.5 Researchers & Academia's characteristics

Table 8: Researchers & academia's characteristics

Researchers & Academia

SHORT NAME: R&A

WORKING THEMES

Science-Policy-Society Interface and Governance:
• Dealing with the interface between Science-Policy-Society
• Environmental Governance

Online Engagement and Education:
• Online Deliberative tools
• Online pedagogic supports

Community and infrastructure preservation:
• Preserving, enhancing parks, natural areas
• Build community capacity for decision-making
• Collaborate with local stakeholders for common goals

Water Management
• Water/wastewater treatment and recovery
• Circular economy.
• NBS
• Advanced wastewater treatment technologies.

Climate adaptation

OBJECTIVES

Environmental Assessment and Analysis:
• Conduct comprehensive environmental evaluations.
• Perform integrated environmental analyses.
• Ensure multi-perspective representation in decision-making.

Sustainable Water Management:
• Prioritize climate change mitigation actions.
• Advocate for efficient water resource management.

Public Outreach and Education:
• Raise environmental awareness.
• Empower residents to identify needs and drive change.
• Foster inclusive spaces for collective action.

Development of Innovative Projects:
• Develop technologies for research.
• Provide tailored solutions for environmental challenges.

DRIVERS

Coordination and Collaboration:
• with other work packages
• with stakeholder/partner with the capacity to test the water reclaimed and follow up its viability as irrigation water, flushing water, process water, etc.

Resource Mobilization: Need people willing to donate time and financial resources

Approach to Solutions: Circular approach and NBS.

Long-term Operation of Treatment Plant: possibility to operate with the treatment plant in a long-term period analysing the different situations and the fluctuations of the water quality obtained.

MAIN CHALLENGES & NEEDS

Cooperation and Knowledge Access:
• Cooperation with demo cases
• Access to knowledge related to demo cases
• Organization of workshops at demo case level
• Development of evaluation procedures at governance process steps.

Infrastructure and Funding:
• Adequate infrastructure and technology solutions
• Funding constraints
• Technical complexity.

Public Acceptance and Regulatory Issues:
• Public acceptance can be an issue
• Governmental doubts
• Strict regulations lacking holistic sustainability approach
• Gaps in legislation hindering novel solution implementation.

Ensuring Treatment Stability and Stakeholder Engagement:
• Improve the stability of treatments to produce high-quality reclaimed water.
• Ensure a sufficient volume of water for testing and validation as AWR.
• Identify stakeholders with the capacity to test and validate reclaimed water in real-world scenarios.
•Addressing issues related to stakeholders' lack of availability or interest.

Limited time

Complexity of Project

TASKS

Strategic Planning and Evaluation:
• Develop Multi-Scales Multi-Actors Strategic Foresight
• Frame evaluation procedures for uncertain situations.

Community Engagement and Capacity Building:
• Conduct community needs assessments
• Organize capacity-building events

Promotion of NBS and Water Governance:
• Prove efficiency of rainwater harvesting and wastewater treatment
•Integrate water governance approaches like WEFE nexus
•Strengthen cooperation among stakeholders
•Implement novel water management aligning with circular economy and EU policies

Innovative Wastewater Treatment and Environmental Technology:
• Design innovative wastewater treatment systems
• Develop sensors for environmental monitoring and data collection
• Apply technology according to stakeholder preferences.

For the Circus Lake demo case: i) Develop a local model for enhanced accuracy in the Tei district, analysing urban aquifer behaviour and recharge volumes. ii) Conduct hydrological modelling of rainfall run-off to quantify captured water volumes for Cirque Lake level control and urban aquifer hydrogeology. iii) Establish a quantitative water management assessment framework for optimal green infrastructure solutions.

Tasks related to AWR:

Patrimonial Framework Development:
• Develop a Patrimonial framework for AWR assessment
• Identify heritage funds, vulnerabilities, and actions to address them
• Compare scenarios for AWR solution acceptability

Valorization and sustainable Approaches:
• Implement efficient rainwater harvesting, nature-based wastewater treatment, reclaimed water reuse, and energy minimization in WWTP, applying circularity principles

Water treatment & reuse:
• Develop treatment to reduce pollutants to have cleaner water, recover nutrients and valuable products
• Enhance system performance to produce high-quality water suitable for safe reuse.
• Validate reclaimed water quality and ensure its acceptance across industrial, cities, and agricultural sectors.

Legislation on AWR, Dissemination, Stakeholder Engagement,

KEY MOTIVATION IN AWARD

Knowledge and Stakeholder Identification
• Identify knowledge at demo cases level
• Identify key stakeholders for workshops
• Identify actions for scenario composition

Circus Lake Park Solution
• Promoting broader implementation of AWRs for efficiency
• Emphasizing social and governance focus for necessary changes

Stakeholder Engagement and Validation:
• Stakeholders boost the validation of this water supporting their test in real application, enhancing its acceptance and successful implementation.

EU policy recommendations

3.6 Water Technology Companies' characteristics

Table 9: Water Technology Companies' characteristics

Water Technology Company

SHORT NAME
WTC

WORKING THEMES

•Sustainable water management;
•Nature-Based Solutions;
•Green-Blue Infrastructure;
•constructed wetland for wastewater treatment;
•River restoration;
•Sustainable Drainage Systems (SuDS);
•sponge cities;
•climate change adaptation planning in water sector;
•Ecosystem Services estimation, evaluation, and monetisation.
•Water pollution control and remediation,
•circular economy, sustainable water management
•Develop water reclamation systems

OBJECTIVES

•Plan, design and research nature-based solutions and sustainable water management.
•Application of green technologies and infrastructures at large scale at planetary level
•Ensure the success of the projects through rigorous management and analysis of the results

MAIN CHALLENGES & NEEDS

•Low Water Prices Impacting AWR Adoption
•Limited Stakeholder Consideration of NBS and Green Technologies
•Complexity in Working with Nature
•Lack of Citizen Engagement
•Absence of Legislation on Run-off Reclamation

TASKS

Feasibility Studies and Design:
•Conducting feasibility studies and design processes.
•Developing design guidelines for implementation.

Research & Development (R&D) Projects

Dissemination

Technical Design and Management

Tasks related to AWR

Feasibility Studies and Design:
•Developing designs integrating AWR, with a focus on NbS for rainwater, storm-water, and grey-water.

Technical Design Refinement and Monitoring:
• Enhancing NbS performance for water production and nutrient recovery, while monitoring water quality.

Educational Activities & Professional Engagement to promote AWR awareness.

NBS Operation, reclaimed System Design:
• Overseeing NbS operation and designing reclaimed water systems.

Project Management and Stakeholder Communication:
•Managing AWR projects & maintaining stakeholder communication

DRIVERS (MOTIVATORS & SOLUTIONS)

•Highlighting multiple benefits of NbS for AWR (not only water reuse).
•Multifunctionality of NBS Good economic performances of AWR Planetary boundaries and challenges
•The actual context of water scarcity

KEY MOTIVATION IN AWARD

•Strong evidence of benefits from AWR.
•Deeper knowledge in specific NBS performances both in technical, economic and social terms that should bring to a wider application
•Clarify the field of AWR in local region

3.7 Small and Medium Enterprise's characteristics

Table 10: Small and Medium Enterprise's characteristics

Small and Medium Enterprise

SHORT NAME
SME

WORKING THEMES

Stakeholder Cooperation and Market Partnerships

• Water resources as partnership cooperation between stakeholders, on a market.

• Including alternative water resources in a more complex discussion (with central and local administrations, health departments, technology companies, etc.) about climate change effects, mainly for keeping and, if possible, improving biodiversity and consequently human living standards.

Sustainable Water Management

• Water management.

• Protection of aquatic environments.

• Water quality objectives (WFD).

• Climate change/changing water availability.

• Water use and reuse.

DRIVERS

Climate and Generational Willingness

• Climate change effects.

• Willingness to cooperate among younger generations due to the climate effects on their future lives.

Funding and Innovation

• Funding available (in cooperation with European partners) for new innovative projects.

Teamwork and Determination

• Teamwork and networking.

• Beliefs and determination.

KEY MOTIVATION IN AWARD

Demonstration Projects and Local Cooperation

• A Bucharest demo case which can be considered at local and central levels as an example to build on for other (bigger) projects.

• Better cooperation within Bucharest (and other) Local Water Forums for building up business/projects relations, with more rapid effects on human well-being.

Knowledge and Awareness

• Increase of knowledge and awareness for the value of water and the need to efficiently use this precious resource.

MAIN CHALLENGES & NEEDS

Knowledge and Societal Engagement

• Lack of knowledge on AWR and weak societal mobilization on alternatives to usual potable water supply systems.

• Little awareness and willingness in politics and general society to put the governance focus on the protection of nature and biodiversity.

Regulatory and Cooperation Challenges

• Lack of applicable regulations.

• Lack of cooperation between stakeholders, a weak point stemming from historical and cultural societal frameworks in Romania (and possibly other Eastern European countries) from one generation ago.

Funding and Support for Environmental Solutions

• Little funding for environmentally-friendly solutions, such as Nature-Based Solutions (NBS).

TASKS

Stakeholder Support and Consortium Building

• Facilitate local stakeholders in forming consortia for global projects.

• Aid in funding applications.

• Engage with stakeholders and offer consultancy.

• Assist in innovative regulation design and implementation.

Ecosystem Services and Research Participation

• Advocate for integrating ecosystem services into decision-making.

• Engage in international projects and network building.

Tasks related to AWR

Regulatory Review and Stakeholder Perception

• Evaluate European and local regulations.

• Gauge stakeholder perceptions of AWR across Danube Lower River Basin countries.

Policy and Forum Development

• Draft policy reports and establish local forums for EU AWR discussions.

Consultancy and Practical Implementation

• Conduct consultancy projects and stakeholder involvement.

• Implement rainwater harvesting at InterSus' rural Brandenburg offices.

OBJECTIVES

Business Relations and Market Development

• Developing business relations in the water sector in Romania, including more related sectors (nature-based solutions, water digitalization, circular economy, etc.).

• Contributing to the transfer of know-how to the Romanian market.

• Developing common school programs for medium and high-level specialists.

Citizen Perception and Knowledge Improvement

• Improving citizen perception and knowledge on European strategies (e.g., Green Deal, Just Transition, etc.).

Environmental Protection and Sustainable Governance

• Putting nature and environmental protection at the centre of decision-making to value nature's ecosystem services and create sustainable governance and economic systems.

Efficient Water Resource Use

• Increasing the efficient use of water resources, including through reuse or alternative water resources.

Professional Growth and Development

• Developing skills and contacts for a peaceful career journey.

4 BUILDING AWARD STAKEHOLDERS' MAPPIN

AWARD is addressing two different layers to build the stakeholders' mapping:

- A conceptual approach reflecting on the analysis of the stakeholders' profiles (section 3.1).
- The identification of the 'real' stakeholders within each DC (section 3.2).

4.1 Based on the analysis of stakeholders needs

By cross-analysing the needs of the DC (explained section 1) and the stakeholders (explained in section 2), a first conceptual view AWARD stakeholders' map is proposed in figure 2. Two criteria have been chosen (i) need for evidence-based solutions (related to AWR) also encompassing stakeholders' engagement (ii) provider of AWR solutions. Even if some AWR solutions, such as rainwater harvesting, have been known for a very long time, their implementation is facing great challenges in terms of acceptability, regulation, implementation costs, technology, etc. One transversal challenge is to demonstrate their multiple benefits so regulation can be pushed and decision can be made, taking into account the most appropriate technical solution.

Figure 2, shows 3 pairs of stakeholders sharing similar level of need for evidence-based solutions.

- Water association and public authorities are not AWR solutions providers but are great levers to set the good conditions for AWR implementation. The former is a channel to raise awareness and contribute to social acceptability. The latter can adapt the policy and regulatory context for the adoption of AWR. In both cases the have a strong need for evidence-based solutions.

Figure 2: Preliminary AWARD stakeholders' map

- Water supplier and SME have an average position. The former has a technical orientation to manage water resources and relies on collaboration with water technology company, researchers and to some extend to SME to access AWR solutions. The latter, often works at the interface between the existing solutions and the potential users. Their work contributes to provide evidence-based solutions.
- Water technology company and researcher & academia are key sources for AWR solutions. both are working to demonstrate the multiple benefits of AWR. The results of their work can provide incentives for public authorities and water association to overcome barriers such as social acceptability and regularity framework.

4.2 From the demo cases stakeholders

To gather information on the stakeholders mobilized within each DC, WP5 has made available a shared working document on the project platform including a DC dashboard and contact information for stakeholders.

4.2.1 Demo cases' dashboard

Each DC is invited to provide the following information to detail its characteristics and allow to monitor AWR actions taken on the field.

Table 11: Fields to describe AWARD Demo Cases

AWARD PARTNER INVOLVED	PERSON LEADING DEMO (EMAIL)	ISSUES TO TARGET
DEMO CASE BASIC BRIEF DESCIPTION	OBJECTIVES	TECHNOLOGIES APPLIED
FLOW DIAGRAM	PERMITS NEEDED	MONITORING POINTS
MONITORING EQUIPMENT	MONITORING PARAMETERS (ONLINE AND LAB)	INTERVENTIONS TO BE IMPLEMENTED IN AWARD
KEY PERFORMANCE INDICATORS	NEEDS FROM OTHER PARTNERS	STAKEHOLDERS' EVENTS
STAKEHOLDERS' CATEGORIES TO BE INVOLVED		

4.2.2 Contact information for demo case stakeholders

The DC information is completed with a list of contacts for each DC. The following table provides the required type of information to build to contact list.

Table 12: Contact Information for Demo Case Stakeholders

ROLE	AWARD PARTNER	STAKEHOLDER CATEGORIES GROUP
RESPONSIBILITIES	STAKEHOLDER'S AFFILIATION	SURNAME
NAME	E-MAIL	POTENTIAL CONTRIBUTION IN AWARD

WP5 and DC are gathering the information for the dashboard and contact. Once available the stakeholders map will be updated.

5 AWARD COMMUNITIES

AWARD 4 DC are at the heart of the project's activities. They are led by DC leaders and gather local partners. It is their responsibility to address the needs and challenges identified in the description of activities (see section 1) and brings together local stakeholders to address the integration of AWR into water supply strategic planning. DC play a crucial role being the connexion between the project's activities and the real-life experiment. Each DC will develop new knowledge that can benefit to the others. Therefore, AWARD has implemented a multi-level communities management from the individual DC to the network activities beyond the scope of the project.

5.1 Individual Demo Case

The first implementation and management level are related to the four individual DC (see figure 3). **The four individual DC communities** composed of AWARD DC leaders, local partners (see table 12) and local stakeholders. Each DC leader is the key contact to reach out stakeholders through the local partners Another task is to follow DC activities and keep WP5 informed. The scale of actions is the DC areas. The main objective of the four individual DC communities is to implement and assess AWR solutions delivered by AWARD to draft new water supply strategic plan. WP5 is supporting the management of the individual DC with DC leaders. One meeting per DC is planned over the course of the project (see section 4.2.2) and additional meetings are expected to be organised by each DC leaders and local partners to progress on their planned activities and ensure the connexion with WP activities (see section 4.2). The frequency of these meetings is discussed within WP5 and align with WP needs.

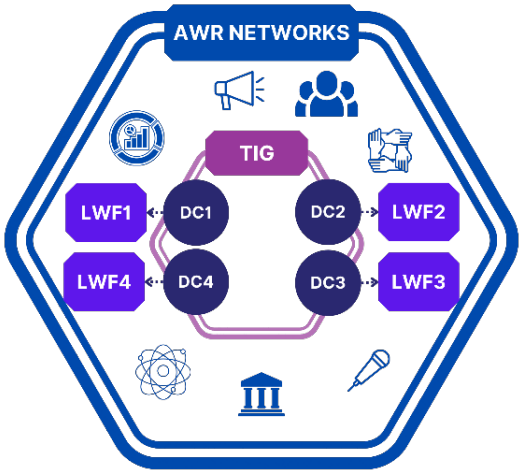


Figure 3: AWARD Multilevel Communities

5.2 Transversal Interest Group

The **Transversal Interest Group** (see figure 3) corresponds to the second AWARD community. It is related to the DC transversal community. It gathers together **AWARD DC leaders, local partners of the 4 DC** (AWARD partners, see section 4.1) **and when possible local stakeholders speaking English**. The scale of action is transversal and links together the 4 DC. The main objective of the TIG community is to ensure (i) the connection among DC and (ii) and the connection between DC and AWARD WPs to support the progress of the project. This community is led by WP5 with the support of DC leaders. In addition, WP1[3] organises monthly meeting inviting WP leaders and DC leaders to ensure the alignment of needs and actions from both sides.

[3] WP1 deals with project management

5.3 Local Water Forum

The third type of community is related to **Local Water Forum** (LWF, see figure 3). LWF is a social engagement platform developed by the World Water Quality Alliance (WWQA[4]) under the umbrella of the United Nations Environment Programme. LWF are created in answer to a variety of local and/or global water-based concerns and aims at supporting stakeholders' engagement on those issues. LWF gathers various profiles of local stakeholders who are free to choose their missions. Under the lead of WP2, each DC will consider creating one LWF focussing on water availability supported by AWR. In the scope of AWARD, LWF aims at (i) creating awareness regarding AWR issues at a local community scale and (ii) contributing to and disseminating AWARD AWR solutions to renew water supply strategic plan.

LWF's development is led by WP2 in closed relation with WP5 (gathering the 4 AWARD DC communities and managing the TIG). BDG (partner n°6) is in charge of this task. The work has started.

5.4 AWR networks

The fourth community, **AWR networks** (see figure 3), aims at reaching out further from the DC stakeholders towards other initiatives. The scale of action is beyond the scope the project from local to international. The aim of the networking is to extend the scale of AWARD promotion, raise awareness and engage with a larger audience. The networking activity is led by WP6[5] under the specific task 6.4 *Multiplier effect, networking and transfer in practice* (led by AQUAVALLEY. Currently, AWARD has liaised with the International Network of Basins Organisation (INBO) and 3S water smart territories. The connection with WWQA will be made once AWARD LWF are set. Finally, AlternativeWaterResources4Water synergy group has been created. It is composed of AWARD, MARCLAIMED and RECREATE, all funded by the same EU programme.

6 OVERALL APPROACH FOR DEMO CASES HARMONIZED MANAGEMENT

6.1 Governance principles

WP5 bridges the project's activities with the DC and vice versa. NTUA as WP5 leader, with the support of OiEau leading task 5.1 *Harmonised and transversal management of AWARD Demo cases* has the responsibility to ensure the connexion between DC and WP is made. It requires to regularly gather the needs from the DC and WPs and be in contact with the DC leaders. NTUA works as a key channel to reach the DC leaders, in contact with local partners, themselves in contact with local stakeholders. On the other way, all contact towards DC should go through WP5.

WP5 missions consist of:

- managing and monitoring AWARD 4 individual DC with the support of each DC leaders
- ensuring the transversal management bringing together the 4 DC (via the TIG)
- linking DC with the other work packages activities and needs.

To those ends, an xls document is available on teams to gather and keep track on WP and DC needs (WP5_MAIN_INFORMATION.xlsx). As explained in the following section, each of those missions has a

[4] https://www.unep.org/explore-topics/water/what-we-do/improving-and-assessing-world-water-quality-partnership-effort

[5] WP6 focusses on Impact Maximisation

dedicated meeting. With the support of the coordinator, NTUA plans the topic to be addressed at each meeting.

DC are composed of a leader and local partners. Table 13 presents them.

Table 13: Demo Cases Leaders and Local Partners

	Demo Case leader	Local partners representatives of the DC	
Demo Case 1 ''CIRCUS LAKE'' Urban Park Bucharest, Romania	UTCB Universitatea Tehnică de Construcții București		
Demo Case 2 Metropolitan city of Milan, Italy	IRIDRA	Città metropolitana di Milano	CAP
Demo Case 3 Cyprus	National Technical University of Athens	EOAA	
Demo Case 4 Santiago de Compostela, Spain	aimen	CETAQUA WATER TECHNOLOGY CENTRE	ViAQUA

6.2 Planning of meetings

6.2.1 Monthly WP5 meetings

WP5 monthly meetings aims to provide the individual DC communities and the Transversal Interest Group the space to foster a broader understanding of the opportunities and challenges regarding the uptake of AWRs at various levels. Depending on the DC & WP needs and the topic of the meeting, WP leaders can attend WP5 meetings to focus on specific topics (see section 4.4). A specific share xls document is available for WP leaders and DC leaders to express their needs (available on AWARD Teams platform, WP5 folder).

Table 14: WP5 plan of monthly meetings

Date	WP5 Planned topics
September 2024	Stakeholder's list
October 2024	Progress/finalisation of construction-upgrade works. Template for technical internal report
November 2024	Start-up/ operation / type of data to collect/ data organising
December 2024	TouchPoint #3
January 2025	Preparation of TIG and GA meeting
February 2024	No WP5 meeting but TIG#1 / LWF#2 / DC#1 meetings
March 2024	Template of the Deliverable for each DC (discussion and suggestions)
April 2025	Discussion of the first results
May 2025	TouchPoint #4
June 2025	No WP5 meeting but TIG#2 / LWF#3 / DC#3
July 2025	Revisions on Deliverables 5.2-5.5
August 2025	Deliverables 5.2-5.5 submission

6.2.2 Meetings at the project's level

At the scale of the project, different meetings provide the opportunity to gather WP and DC leaders with local partners.

- In addition to the permanent workflow of the **TIG** thanks to WP5 monthly meetings gathering the DC leader and local partners, 4 TIG meetings are planned to address specific topics related WP activities (i.e. use of the AWARD digital ecosystem developed by WP4 to support discussion for the integration of AWRD into water supply strategic planning). For those for planned meeting (see table below), it is expected that local stakeholders speaking English also attend the meetings.
- **General Assembly** is a face-to-face meeting, gathering all the partners of the project. The aim is to address both technical (progress of the project) and administrative topics. GA n°2 and n°3 are welcomed by one DC. GA#2 and GA#3 will also have a dedicated TIG session.
- **TouchPoint meetings** (TP) are virtual GA composed of all the partners. Due to the format, less space is available for deep discussion among DC but nevertheless it offers the opportunity to update on progress and exchange with WP.
- **DC meetings**: 1 meeting per DC is planned. In addition, all DC are expected to organise meetings under the lead of DC leaders and local partners, inviting local stakeholders to gather a water stakeholder board. The frequency of DC meeting is recommended to be at least every 6 months; WP5 must be informed on those meetings.
- **LWF meetings**: 4 meetings are planned over the course of the project. nevertheless, the creation of LWF is parallel to DC activities. Until LWF are created, projects' activities will focus on DC stakeholders.

Table 15: AWARD planned meetings

	January	February	March	April	May	June	July	August	September	October	November	December
Y1- 2024		KoM - OiEau - Paris. FR			TP1 (30/05)				TP2 (19/09)			TP3 (12/12)
Y2 - 2025		GA2 - UTCB TIG1 / DC#1			TP4			TIG2 / DC#3 NTUA	TP5			TP6
Y3 - 2026		GA3 - IRIDRA/CMM TIG3 / DC#2			TP7	TIG4 / DC#4 AIMEN / CETAQUA			TP8		GA4 AQUA-VALLEY	

GA: General Assembly | TP: TouchPoint meeting | TIG: Transversal Interest Group

6.3 Ensuring the workflow between the Demo Cases and the Work Packages

6.3.1 Overview

To ensure the needs and activities of WP and DC are known, planned and well aligned with meetings, WP5 has prepared a shared xls document named WP5_MAIN INFORMATION available on AWARD teams' platform in WP5 folder. The document's structure in presented in table 16. The blue cells are related to the content on the project and WP5 organization, the purple cells are related to DC information and the pink cells are related to the needs in terms of stakeholders and from WP.

Table 16: WP5 dashboard structure

AWARD WP5_STRUCTURE	GANTT CHART	WP5_EMAILING LIST	Meetings overview	DEMO CASE INFO	DC MEETINGS KEY POINTS	STAKEHOLDER'S LIST	SH Profil need from WP	WP DC needs

Description of the 9 sheets of WP5 dashboard:

- AWARD WP5_STRUCTURE reminds the WP tasks, partners involved, milestones and deliverables per year
- GANTT CHART: presents the timeline of WP5
- WP5_EMAILING_LIST: provide the emails of DC leaders and local partners
- DEMO CASE INFO: summarizes the partners involved, issues to target; basic brief description, objectives, technologies applied, flow diagram, permits needed, monitoring equipment and parameters, intervention to be implemented in AWARD, KPIs, needs from other partners, stakeholders' events and stakeholders' categories to be involved
- STAKEHOLDERS LIST: details AWARD partner, stakeholder categories group, responsibilities, stakeholders' affiliation, surname, name, email, potential contribution in AWARD
- SH PROFIL NEED FROM WP: for each WP to explain the category of stakeholders they need to get in contact with
- WP DC NEEDS: proposes an overview of the different meetings and WP needs to contact DC.
- DC MEETINGS: summarizes all the meetings organized by each DC
- MEETINGS OVERVIEW corresponds to table n°14.

WP5 dashboard is a live document. DC and WP leaders can update it at any time. This document is also used during WP5 monthly meetings.

6.3.2 Narrative to support demo cases' involvement

After the first months of the project, it appears that the topics from WP to be addressed to DC and the related solicitation of DC leaders, local partners and local stakeholders needed to be clarified. To fill in this need, OiEau prepared leaflet focusing on a DC narrative in order to highlight:

- The important role of the DC to support AWARD activities.
- The key topics that should be addressed over the three years of the project.

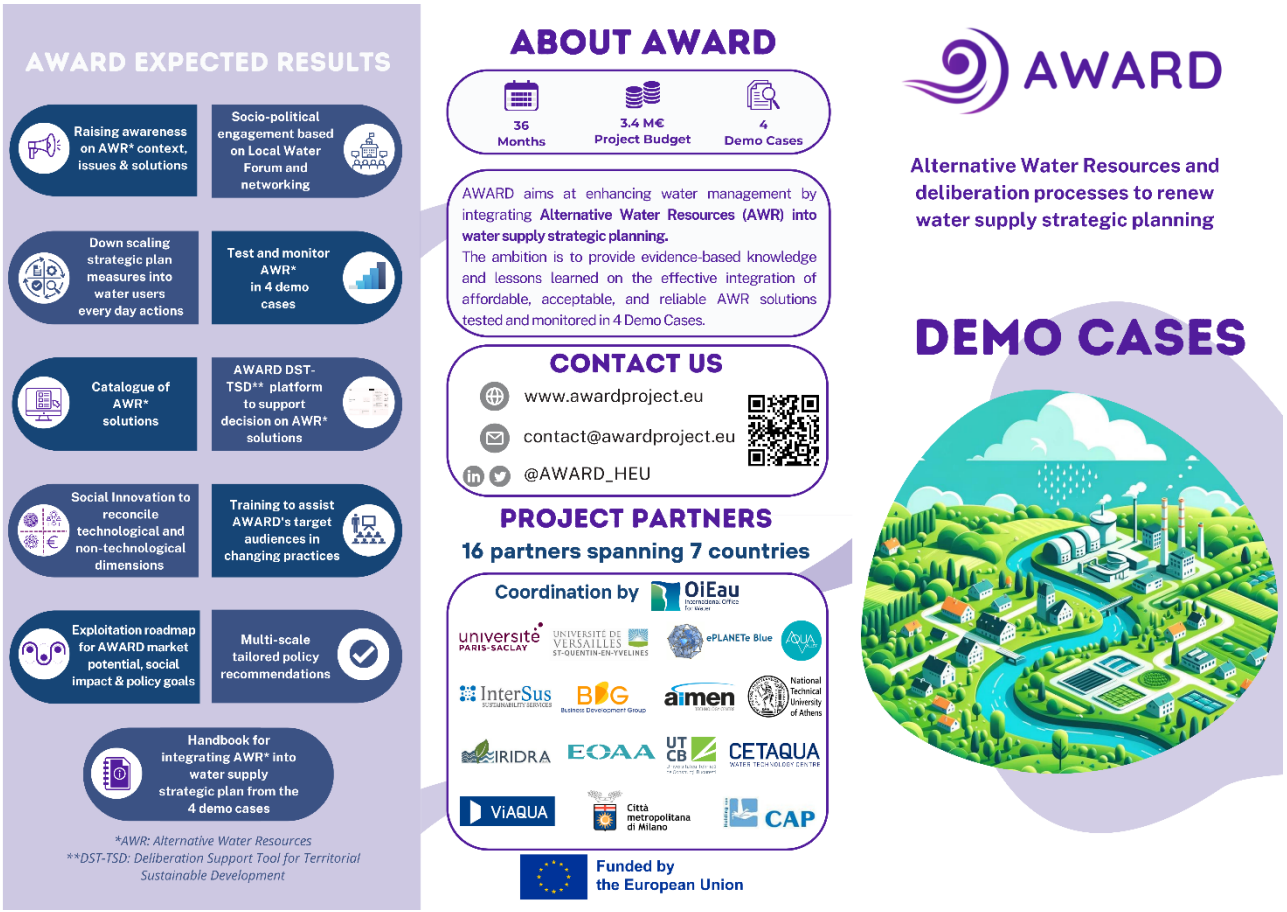


Figure 4: Leaflet focusing on the Demo cases narrative p1

AWARD DEMO CASES

AWARD 4 Demo cases are central to AWARD activities. Each case has different issues related to AWR (see fig. 2), but they all share a common goal: integrating AWR into their water supply strategic planning.

To achieve AWARD partners need to collaborate with demo cases' stakeholders. This is organized through Work Package 5, led by NTUA, ensuring alignment of the project's activities with the Demo cases (see table 1 for the key topics to be addressed by Demo cases).

On the Demo cases' side, continuous involvement of stakeholders is required throughout the project's duration.

ROLE OF AWARD DEMO CASES

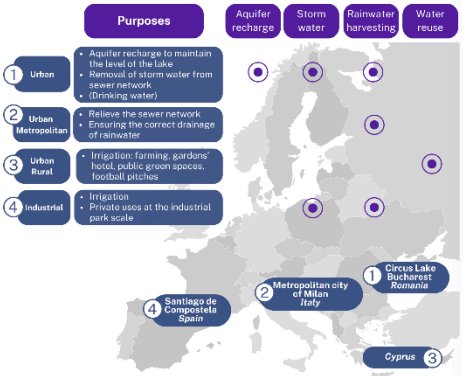


Figure 2: AWARD demo cases specificities

2024	2025	2026
AWR policy analysis (incl. interviews) - WP2	Policy recommandations WP2	Policy recommandations (WP2)
Social acceptance & accountability (on-line survey) - WP2	Development of Local Water Forum -WP2	Development of Local Water Forum (WP2)
Local Water Forum potential creation - WP2	Monitoring of AWR solutions at DC level - WP5	Report on AWR solutions at DC level (WP5)
Implementation of AWR solutions at DC level - WP5	Presentation and use of AWARD Digital ecosystem DC (WP3-WP4) to • discuss priorities • start the deliberation • create scenarios	Support the decision process to integrate AWR into water supply strategy planning (WP3-WP4)
Structuration of AWR issue (desk analysis & visits)- WP3		
Development of AWARD digital ecosystem - WP4	Start of AWARD training on solutions developed (meetings) -WP6	Exploitation plan (up-scale of transfer) of AWARD solutions (WP6)

Table 1: Key topics to be discussed with AWARD Demo cases

Why

to engage with stakeholders?

- Co-create a shared understanding of AWR-related issues
- Test and monitor AWR solutions
- Support AWARD activities
- Pave the way for stakeholders to integrate AWR into their water supply strategic planning

How

to engage with stakeholders?

- Provide clear needs from AWARD partners to Demo cases' stakeholders
- Hold dedicated meetings throughout the development of AWARD activities to help understand the issues in each DC and support the decision process to integrate AWR

Benefits

For stakeholders

- Raise awareness about AWR and water-related issues
- Access both technical and non-technical knowledge on AWR
- Get support to discuss and decide on integrating AWR into water supply strategic planning.

For AWARD

- Provide evidence-based solutions to support AWR integration into water supply strategic planning

Figure 5: Leaflet focusing on the Demo cases narrative p2

6.4 Topics to be addressed by Demo cases

AWARD' progress is closely dependent on the work flow between the WP and the DC. To provide clarity on the timing and topics partners would like to be addressed by DC leaders, local partners and stakeholders a first overview has been set for the 3 years of the project (see table 17).

The following sections provide an insight from each WP.

Table 17: First planning of topics to be addressed by Demo cases

2024	2025	2026
AWR policy analysis (incl. interviews) - WP2	Policy recommandations WP2	Policy recommandations (WP2)
Social acceptance & accountability (on-line survey) - WP2	Development of Local Water Forum -WP2	Development of Local Water Forum (WP2)
Local Water Forum potential creation - WP2	Monitoring of AWR solutions at DC level - WP5	Report on AWR solutions at DC level (WP5)
Implementation of AWR solutions at DC level - WP5	Presentation and use of AWARD Digital ecosystem DC (WP3-WP4) to • discuss priorities • start the deliberation • create scenarios	Support the decision process to integrate AWR into water supply strategy planning (WP3-WP4)
Structuration of AWR issue (desk analysis & visits)- WP3		
Development of AWARD digital ecosystem - WP4	Start of AWARD training on solutions developed (meetings) -WP6	Exploitation plan (up-scale of transfer) of AWARD solutions (WP6)

6.4.1 WP2 topics to be addressed by demo cases

The work in WP2 (Socio political support and engagement for AWRs), led by BDG, is both laying the foundation for the organisation of the TIG and is taking stock of TIG dialogues outcome in the planned WP deliverables.

The first step is made with the examination of the existing policy and regulatory frames performed at EU as well as DC level capturing the process of policy goals downscale towards the level of implementation thus creating a strong basis for evaluating the role taken by AWRs in the current European and national contexts. Existing policies and regulatory frameworks at the European level are examined in parallel with the ones in the DCs to identify potential challenges and bottlenecks that hinder AWRs uptake in local development plans and stimulate the identification of the alternative solutions for overcoming them.

Furthermore, the social awareness and acceptability of the AWRs at focus in AWARD is assessed at DC level with WP2 team facilitating the LWFs as platforms for engaging stakeholders with different expertise and profiles, relevant to the specific context of each DC country. Indeed, collaboration with demo cases is needed be needed for the potential creation of LWF. To pursue that objective, guidelines for organisation of LWFs and a reference example of the first LWF organised in the DC#1 in Romania, are made available for orientating DCs activities and guiding the demo case leads in their next steps for planning and organization of the LWF. An interview guide to assess social acceptability is also applied by each DC with a flexible approach to match the local conditions. The DCs play a leading role in adapting LWF agendas for collecting relevant input for the identification of policy gaps, capacity building needs and education and training objectives to facilitate effective and sustainable AWRs promotion. The process is closely monitored in cooperation with WP5

The input collected in the co-creation and deliberative processes described above feeds in the dialogues within the TIG. All processes are closely monitored together with WP5 to ensure synergies across local contexts are identified and relevant experiences are shared across demo cases for broadening the understanding of different pathways for AWRs uptake in different circumstances. This will provide essential contributions captured by Wp2 team for elaborating the AWARD policy support deliverables and will guide actions for reaching out towards complementary initiatives, in the planned AWR networks.

6.4.2 WP3 topics to be addressed by demo cases

WP3 (Patrimonial framework for AWRs assessment), led by UPSaclay, organizes the workflow with the demonstration cases through 4 phases:

The first phase (fall 2024 - spring 2025) consists, following field trips, in structuring the problem for each Demo Case, (1) by building a heritage park within ePLANETe (developed in WP4) which makes it possible to identify the key components relating to AWRs (e.g.: specificity of AWRs at the Demo Case scale, Biodiversity, Agriculture, Tourism, Inhabitants, etc.). The objective is to make the key components socially explicit on the territory for an AWR problem; (2) to identify, in connection with WP2, the categories of actors and the issues of AWRs and the challenges of integrating AWRs into planning strategies; (3) A first inventory of actions that would make it possible to take AWRs into account in planning strategies.

The second phase (spring 2025 - fall 2025) consists of co-constructing scenarios for integrating AWRs into planning strategies. This involves not only continuing to identify possible actions, for example within the Local Water Forum or others, but also developing narratives of these scenarios.

The third phase (fall 2025 - spring 2026) consists of using the Deliberation Matrix to compare, in a participative process, the scenarios for integrating AWRs into planning strategies and assessing their acceptability. This activity could take place, for example, within the Local Water Forum or elsewhere, depending on the stakeholders we wish to involve in this evaluation process.

The fourth phase (from summer 2026) involves developing educational materials to present the approach and method (in connection with WP2 and WP4), case studies (in connection with WP5), getting to grips with the ePLANETe tool (in connection with WP4) and feedback (WP5 and WP6).

WP3 prepared a specific document to explain its roadmap over the 3 years of the project, available on teams[6].

6.4.3 WP4 topics to be addressed by demo cases

WP4 (Digital ecosystem for AWRs planning), led by ePLANETe aims at providing AWARD digital ecosystem (DE) as a support for DC stakeholders to discuss the integration of AWR in their strategic water supply planning. The DE will propose different tools: the heritage park, the deliberation matrix and the scenarios.

WP4 is strongly connected to WP3 as WP3 engages with stakeholders, to gather information and data that will be used to feed the different tools.

The aim is to provide stakeholders with representation of their issues and needs to build a common understanding of what is at stake. This corresponds to the heritage park available on the DE. Once this step is reached, then the discussion will be structured around the deliberation matrix and towards possible scenarios dealing with the integration of AWR into water supply strategic planning.

[6] WP3 Roadmap_Final_sept2024.pdf

The first analysis of each DC (made until the end of 2024) made by WP3 will be used to create the heritage park, which will be presented at the AWARD general assembly in February 2025.

Until May 2025, the deliberation matrix for each DC will be built (and presented during TP#4), which will lead to the elaboration of scenarios by July 2025 (presented during the TIF#2 and DC#3 meetings.

6.4.4 WP6 topics to be addressed by demo cases

Overall, WP6 (Impact maximization), led by OiEau, aims at bringing AWARD activities and results outside the direct scope of the consortium while providing support to partners for communication and dissemination. It also plays an important by vulgarising AWR knowledge. WP6 related tasks are:

(i) Communication and dissemination (running during the entire AWARD life span, led by AQUAVALLEY with the support of OiEau): DC leaders and local partners are expected to support the development of specific communication materials, social media, and to translate some of them in their native language. This is mainly happening in 2024, updates are expected in 2025-2026.

(ii) Social innovation and capacity building (running during the entire AWARD life span, led by OiEau): social innovation factsheets will be delivered to address societal challenges such as climate change, water scarcity, and evolving regulatory contexts, in relation to AWARD's innovative solutions. DC partners will be mobilised to set specific topic. Capacity building refers to AWARD training activities that will be co-developed with other WP, DC partners and local stakeholders. AWARD DC will be involved in the content development as well training session organisation (2025-2026)

(iii) AWARD exploitation road map including KER[7] catalogue (month 6 – month 36, led by OiEau). WP6 has started to on the list of AWARD's results (to define AWARD's offer). On the other, AWR demand for AWARD' solutions will be further enquired by completing the stakeholders' profiles. The survey started for AWARD *Communication and dissemination plan* (deliverable 6.1) will be extended to DC stakeholders in 2025. IL will be possible to deliver AWARD value proposition canvas will be delivered that paths the way the AWARD business model and exploitation planned for 2026.

(iv) Multiplier effect, networking and transfer in practice (month 6 – month 36, led by AQUAVALLEY). Networking activities are essential to promote AWARD's solutions and will benefit from all the other WP. DC will be mobilised to join other initiatives such as the Water Smart Territories platform in 2024. In 2025 the focus will also be on the implementation of AWARD multiplier plan. DC will be involved to expand on AWARD activities in 2025 and 2026.

[7] Key Exploitable Results

7 CONCLUSION

Deliverable 5.1 *Harmonized Pilot Site Interest Groups Implementation Guidelines Including a Stakeholder Mapping* serves as a comprehensive guide for the execution and management of the AWARD project's Demo Cases, focusing on the integration of Alternative Water Resources (AWR) in their water strategic plan. The document emphasizes the strategic alignment between the Demo Cases and the overall objectives of the AWARD project, providing clear governance structures, stakeholder mapping, and pathways for effective collaboration between partners.

Throughout the document, a robust approach has been laid out to engage stakeholders from different sectors, including water suppliers, public authorities, researchers, water association, and small and medium enterprises. These stakeholders play a pivotal role in supporting the various phases of the Demo Cases, from planning to implementation, ensuring that AWR solutions are socially acceptable and practically viable.

The emphasis on monthly meetings and a structured workflow between the Demo Cases and the work packages highlights the importance of communication and coordination in addressing both technical and social challenges. Furthermore, the creation of multilevel communities—ranging from individual Demo Cases to Transversal Interest Groups and Local Water Forums—ensures that knowledge sharing and stakeholder engagement are fostered at both local and transnational levels.

By outlining governance principles and a detailed meeting structure, the document underscores the need for continuous monitoring and engagement, making it clear that stakeholder involvement is key to the success of the AWARD project. The planning and management of these meetings ensure that the objectives of each Demo Case are aligned with the project's broader goals, with a particular focus on the long-term impact of AWR solutions.

Overall, the guidelines presented in this document provide a framework for harmonizing the implementation of AWR solutions across various geographical and institutional contexts, ensuring that the project’s goals are met efficiently while maximizing its societal and environmental impact. The project’s emphasis on deliberation, collaboration, and stakeholder engagement aligns well with the overarching goal of renewing water supply strategic planning through the integration of alternative water resources.

AWARD

Alternative Water Resources and Deliberation processes to renew water supply strategic planning

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