



WP5. CAPACITY BUILDING AND EXCHANGE OF EXPERIENCES

Output 5.2 Compendium and recommendation papers

This document reports recommendations resulting from the discussion carried out during local meetings and, in particular, the interregional roundtable held in Seville on June 29th, 2023. It incorporates principles, approaches and strategies highlighted by the relevant stakeholders and decision makers to contribute to face the challenge of water scarcity by using the reclaimed water as a complementary source to surface water.

Responsible partner: AMAYA

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1.BACKGROUND

This document has been written in the context of the MENAWARA project on Non-conventional Water Re-use in Agriculture in Mediterranean countries.

The joint challenges of the MENAWARA project consist in providing additional resources by recycling drainage and wastewater, rationalizing water use practices and setting operational governance models in line with national and international plans. The project is designed to enhance access to water through the treatment of wastewater to be re-used as complementary irrigation and to strengthen the capacity of governmental institutions, non-state actors operating in the sector, technicians, and farmers.

The document reports the activities carried out in the fifth Work Package (WP5) of the MENAWARA project and, in particular, is related to the **Output 5.2 “Compendium and Recommendation papers”** and **Activity 5.2.1 “Stakeholders dialogue and water governance improvement”** as described in infographic below (Figure 1).

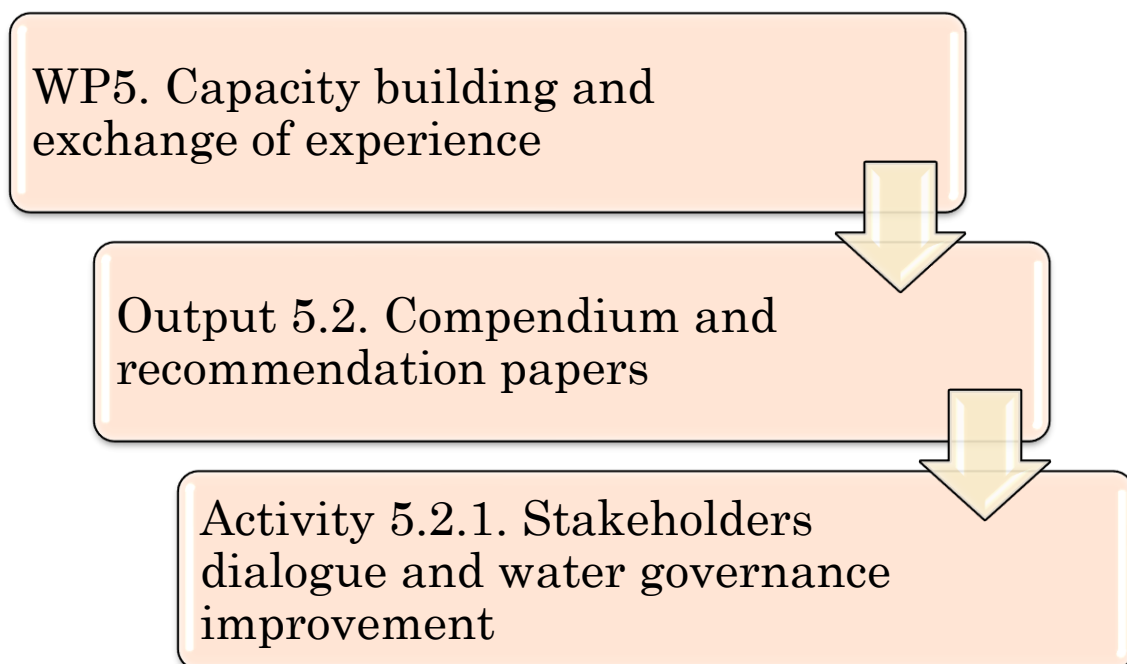


Figure 1. Infographic on the context of this technical report.

2. INTRODUCTION

In the Mediterranean area, characterized by long and recurring periods of drought that have been aggravated in recent years as a consequence of climate change, the reuse of water in agriculture has become an essential issue. The promotion of non-conventional water in agriculture has been at the core of the MENAWARA project in Spain and, in particular, of the roundtable organized by the Agency for the Environment and Water of Andalusia (AMAYA) at the Global Omnium Auditorio Acuario de Sevilla.

The roundtable was organized in order to raise awareness and promote the use of Non-Conventional Water as wastewater in agriculture, together with the relevant stakeholders working in the water sector. The event was organized to become a meeting point for farmers, farmers' association, technicians, managers, academia, local communities and local/national authorities to debate the use of reclaimed water in 21st century agriculture. It has been an opportunity to reflect jointly on the situation of water reuse in agriculture and its legal and regulatory conditions; issues that are currently very topical.

Key recommendations derived from the roundtable discussions are reported in the document.

3. WATER REUSE IN AGRICULTURE: A VISION FROM ANDALUSIA. SHARED EXPERIENCES, CHALLENGES AND RECOMMENDATIONS FROM THE SECTOR

The Spanish interregional roundtable has been organized to joint reflect on the situation of the reuse of water in irrigated agriculture, its legal and regulatory conditions, the experiences that are being developed and the future challenges that the sector faces.

The event, held in hybrid format (face-to-face and online) was attended by numerous stakeholders involved in the subject, both at national and regional level - Andalusia and Murcia. In-person attendees were 69 including farmers, farmers' associations, technicians, managers, academia, local communities and local/national authorities.



In order to encourage dialogue between the different stakeholders involved and promote discussion, the agenda (in Spanish and English) was structured as follows:

WATER REUSE IN AGRICULTURE: A VISION FROM ANDALUSIA SHARED EXPERIENCES, CHALLENGES AND RECOMMENDATIONS FROM THE SECTOR PROGRAM JUNE 29th, 2023 VENUE OF THE EVENT: GLOBAL OMNIUM AUDITORIO- ACUARIO DE SEVILLA, SPAIN	
9:15 H	OPENING SESSION Institutional welcome. <ul style="list-style-type: none"> • María Luisa López Cánovas, Director General for Water Management and Environmental Quality, Environment and Water Agency of Andalusia (AMAYA). • Alejandro Lafarga Martínez, Project Officer ENI CBC MED.
9:45 H	THE MENAWARA PROJECT: NON-CONVENTIONAL WATER REUSE IN AGRICULTURE ACROSS MEDITERRANEAN COUNTRIES <ul style="list-style-type: none"> • Alberto Carletti, MENAWARA Coordinator, UNISS-NRD. Welcome and brief presentation of the MENAWARA project. • MENAWARA project video presentation. • Isabel Martín, MENAWARA Technical Manager (AMAYA) MENAWARA in Andalusia.
10:15 H	GROUP PHOTO
10:25 H	COFFEE BREAK
10:55 H	KEYNOTE SPEECH: SPANISH NATIONAL FRAMEWORK FOR WATER REUSE IN AGRICULTURE <ul style="list-style-type: none"> • Alejandra Puig Infante, General Deputy Director of Water Protection and Risk Management, Water General Directorate, Ministry for the Ecological Transition and the Demographic Challenge. • M^a Agustina López Martín, Head of technical studies department at the General Secretariat for Water Protection and Risk Management, General Directorate of Water, Ministry for Ecological Transition and Demographic Challenge.
11:40 H	OTHER RECLAIMED WATER IRRIGATION EXPERIENCES IN ANDALUSIA <ul style="list-style-type: none"> • Antonio Montes, Technician from CR Tírris, Córdoba. • Juan Carlos Pozo, Technical Director from CR Northeast coast, Cádiz. • Immaculada Polo López, Almería Solar Platform, AQUACYCLE Project (ENI CBC MED). • Francisco Pedrero, CEBAS-CSIC Murcia, PROSIM Project (ENI CBC MED).
12:40 H	ROUND TABLE: PRESENT AND FUTURE OF WATER REUSE IN AGRICULTURE: CHALLENGES AND RECOMMENDATIONS. Moderator: Fernando Estévez , EMASESA Water Chair Advisor - University of Sevilla. <ul style="list-style-type: none"> • Antonio Martín Pérez, Head of Service for Irrigation and Infrastructures of the Regional Ministry for Agriculture, Fisheries, Water and Rural Development of Andalusia. • María Jiménez Gutiérrez, Technical Director at the Guadalquivir Hydrographic District Confederation. • Pedro Simón, Technical Director of the Water Sanitation and Treatment Department from the region of Murcia (ESAMUR). • David Lozano Aguilera, Managing Director of the Eastern Almería Public Company (GALASA), in association with ASA. • Emilio Carrasco, University Professor, Irrigation and Hydraulics Research Group, University of Córdoba. • Francisco Carrasco Arenas, Technical Manager of the Andalusian Irrigation Community Association (FERAGUA).
14:10 H	CLOSING SESSION <ul style="list-style-type: none"> • Álvaro Real Jiménez, General Director of Water Infrastructures, Regional Ministry for Agriculture, Fisheries, Water and Rural Development of Andalusia. • Javier de Toms Mendri, Managing Director of the Environment and Water Agency of Andalusia (AMAYA).
14:30 H	LUNCH
16:30 H	VISIT OF THE MENAWARA PILOT PROJECT <ul style="list-style-type: none"> • Experimental Center for New Water Technologies, Carrón de los Celedones, Sevilla.



4.MAIN CONSIDERATIONS AND RECOMMENDATIONS FROM THE ROUNDTABLE

The main future challenges that have been debated and that the sector faces in the short and medium term have been fundamentally legislative, administrative and technological in nature.

In Spain there is a clear commitment to the use of reclaimed water as a complementary source to surface water, especially in times of drought like the one we are experiencing. To achieve this, the vision that wastewater should be considered as a resource and not as a discharge must be promoted. The recent entry into force of Regulation 2020/741 of the European Parliament and of the Council, relating to the minimum requirements for the water reuse in agriculture, represents a clear challenge, but also an opportunity for the sector. In this sense, the following points were considered key to comply with said implementation:

- It is necessary to take into account that, although it is a fairly restrictive regulation, it will undoubtedly provide confidence to both the end user and the consumer; although it is also true that this greater security will require greater technological investment, since the reliability of the reclamation process will be essential;
- If we want to move forward and implement or adapt technologies capable of responding to the required water qualities, it is necessary to promote R+D+I and, without a doubt, financing in the sector;
- It is necessary to draw lessons and share experiences to face other challenges, such as the implementation of the “Risk Management Plan” or the promotion of collaboration, interaction and understanding between the different stakeholders involved;
- The correct water reclamation must start from correct prior depuration. In this sense, the involvement of municipalities, control of discharges and control at source are fundamental issues;
- Collaboration and administrative simplification are essential for the sector and for the implementation of the new EU Regulation;
- Although the use of non-conventional water resources is essential to address water scarcity, it is necessary to continue working and making progress in optimizing water demand in irrigation;
- It is essential to carry out good water governance in relation to the different offers (fresh water, underground, desalinated, runoff, reclaimed water), which will imply an ordering of the different uses as well as the responsibilities of the stakeholders involved. Likewise, it is necessary to advance a comprehensive/holistic vision of water.

Already within the framework of wastewater depuration, another challenge has been posed with the updating of the Urban Wastewater Treatment Directive (91/271) in which the European Union is currently immersed, not

only for what it represents for the wastewater depuration, but for its connectivity with the water reclamation and reuse in agriculture. The modifications that are being proposed will also pose important challenges at the administrative, regulatory-legislative and technological levels; but these modifications must allow continued progress in the water reclamation and reuse in a priority sector, not only in Spain but throughout the Mediterranean area, such as agriculture.