



## 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 the interregional roundtables held in Palestine on December 15th, 2023. It incorporates principles, approaches and strategies highlighted by the relevant stakeholders and decision makers to manage and promote the use of TWW in agriculture

Responsible partner: WE WORLD

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## 1. BACKGROUND

This report 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).

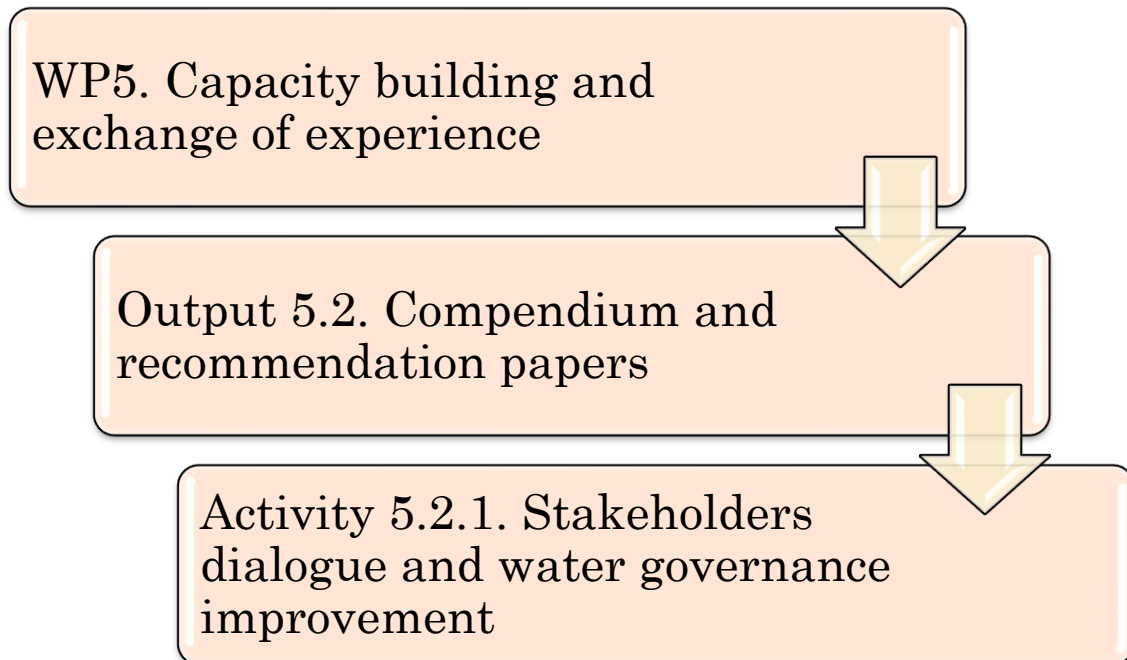


Figure 1. Infographic on the context of this technical report.

## 2. INTRODUCTION

The MENAWARA project focused on the importance of engaging the stakeholders in the implementation of all activities. This engagement has been essential for the establishment of Living Lab, their active engagement and the issue of recommendations resulting from the discussion carried out during regional and interregional roundtables.

Thanks to the project, farmers and technicians have been involved in designing and implementing irrigation trains. Field visits and meetings have been organized to share techniques with authorities to be in line with national rules. Innovative irrigation trains adapted to Treated Wastewater were identified and, accordingly, the design of demo sites equipped with the selected trains and the installation of the irrigation networks have been done in close coordination with stakeholders.

Stakeholders have been involved in local roundtables and interregional roundtables organised to address governance challenges and opportunities as well as to support the Water Users Association and communities. This document reports the main recommendations resulting from the activities carried out along the project and, in particular, during the international roundtable held in Ramallah on December 15th, 2023.

## 3. INTERNATIONAL ROUNDTABLE ON RE-USE OF NON-CONVENTIONAL WATER IN AGRICULTURE

The MENAWARA project was an opportunity to open the dialogue between stakeholders, to engage and look at the policies related to WW treatment and reuse, considering the lesson learned throughout the project to come up with recommendations that shall contribute to the national policies, which are encouraging the reuse and supporting reducing the pressure on domestic water.

On December 15th, 2022, an international roundtable was held in Ramallah, in Palestine, to discuss the sustainability of wastewater treatment and Reuse of treated water in agriculture.

The Roundtable focused on RE-USE OF NON CONVENTIONAL WATER IN AGRICULTURE aiming at gathering the lesson learned and come up with recommendations to enhance the concept WWT, and reusing treated wastewater.



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The roundtable started with panel presentations highlighting several topics by the stakeholders (Ministry of Agriculture and the Palestinian Water Authority, Project partners, and researchers) as follows:

- Policies in Palestine: policy on the use of non-conventional water, which includes the various type of using the non-conventional waters, the ways in which it is possible to develop them and improve these sources;
- Treated water reuse policy: More focused on agricultural reuse in the areas where it is not possible to find agricultural water, to add quantities of TWW in order to reduce the amount of transboundary wastewater and decrease the pressure on limited groundwater resources.
- Environmental sustainability: it encompasses multiple issues, from the environmental impact of the occupation to the reduction of waste. It should be necessary to focus on an integrated approach beyond sectorial interventions: protection, sanitation, education, advocacy community building are all intertwined. A territorial approach is necessary to tackle all these aspects simultaneously with the contribution of all stakeholders.
- The need to address the cause rather than the symptoms. The issue is not the financial access, but lack of access to basic services and resources. The change needed is in terms of narrative, rather than solely



in technological innovation. It is necessary to work together and actively engage donors, diplomatic missions and other stakeholders to advocate for this purpose.

- The importance of water re-use in the Palestinian context and the importance of having and sticking to the set standards on water reuse.
- The challenge of availability of expertise in Palestine on the water reuse.
- The MoA has a plan for the reuse of treated water based on the optimal use of water, using modern irrigation systems, regular analysis of water both fresh and salty water.
- Presentation of a case study, 'Modelling impacts of irrigation with TWW on soil' focusing on the study area of Beit Dajan,

Following the presentations and studies and after the discussions, the following main take away from the roundtable were summarized;

- The discussion tackled the need for adequate legislation to establish what kinds of secondary water resources, including desalinated waters, can be used for a variety of purposes considering the ever-increasing demand.
- Wastewater is a needed resource in Palestine;
- The intervention in Beit Dajan entails both hard (WWTP rehabilitation, irrigation network construction) and soft components (capacity building, awareness raising) and includes also academic researches (on perception of water reuse, impacts of water reuse on soil and plants and optimization of irrigation management)
- Sustainability of the operation of the WWTP is a main concern expressed: how can stakeholders ensure the continuation of the WWTP and irrigation network? This is a concern of WeWorld, from the project's inception, that's the reason why they are investing in capacity building and in the living lab concept, clarifying roles and responsibilities through the Water User Association, and the capacity of maintenance and monitoring of the WWTP. The concern of sustainability needs to be further discussed and a plan elaborated in the coming months with all involved stakeholders.
- Governance of water reuse including roles and responsibilities of involved stakeholders need to be clarified and this is also essential to ensure the sustainability of the WWTPs.

## 4. RECOMMENDATIONS

1. Further roundtable discussions should be organised involving public, private stakeholders and NGO's on ensuring the financial sustainability of wastewater treatment plants (WWTP) as it is a major bottleneck for WWTPs in Palestine, including how national institutions can assist local authorities in realising the cost-recovery, polluter pays principle and engaging the private sector.
2. Regulations should be further adapted or updated to create an enabling environment for treated wastewater reuse projects (e.g. sludge disposal quality requirements). The involvement of local communities engaged in TWW projects in updating local regulations and policies is recommended.
3. Roles and responsibilities of both local and national actors in TWW should be further clarified. As there are health risks associated with the reuse of TWW, good coordination, planning and control are important.
4. The Palestinian Water Authority (PWA) or regional authorities should facilitate and support local councils to set up agreements with national authorities on monitoring of the processes of waste water treatment.
5. Ministry of Agriculture and PWA should share the masterplan for TWW reuse timely, so that, in future projects, this Masterplan indicating priority areas in Palestine can also be considered by other development actors.
6. Further raising awareness on TWW reuse in Palestine and on the safety and strict quality standard applied by PWA, MoA.
7. Local authorities should take measures to ensure knowledge transfer when key staff retires or relocates to ensure that knowledge on WWTP and TWW gained through years of experience is maintained and built upon.
8. A discussion and vision on centralization versus decentralization of wastewater treatment for reuse involving research institutes, private, NGOs and public actors in the field of sanitation for reuse should be organized taking into consideration more nature-based solutions for treatment.
9. Capitalizing on existing TWW projects, including Beit Dajan, should be encouraged by National authorities as well as exchange between actors in the sector. The concept of living lab applied in MENAWARA should be further enhanced by engaging research institutes, students



and community members, to foster new ideas able to ensure project sustainability.