



## WP5. CAPACITY BUILDING AND EXCHANGE OF EXPERIENCES

Output 5.2 Compendium and recommendation papers

### ARAB WATER FORUM PANEL SESSION RECOMMENDATIONS

Responsible partner: CIHEAM- BARI and NRD-UNISS

24/09/2021

*Menawara is a project funded by the EU under the ENI CBC Med programme. Its total budget is €2.901.546,93 out of which €2.611.392,23 as EU funding (90% contribution).*



This document has been produced with the financial assistance of the European Union under the ENI CBC Mediterranean Sea Basin Programme. The contents of this document are the sole responsibility of CIHEAM-BARI and NRD-UNISS and can under no circumstances be regarded as reflecting the position of the European Union or the Programme management structures.

The 2014-2020 ENI CBC Mediterranean Sea Basin Programme is a multilateral Cross-Border Cooperation (CBC) initiative funded by the European Neighbourhood Instrument (ENI). The Programme objective is to foster fair, equitable and sustainable economic, social and territorial development, which may advance cross-border integration and valorise participating countries' territories and values. The following 13 countries participate in the Programme: Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestine, Portugal, Spain, Tunisia. The Managing Authority (JMA) is the Autonomous Region of Sardinia (Italy). Official Programme languages are Arabic, English and French. For more information, please visit:

[www.enicbcmed.eu](http://www.enicbcmed.eu).

The European Union is made up of 28 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms. The European Union is committed to sharing its achievements and its values with countries and peoples beyond its borders.

## ARAB WATER FORUM PANEL SESSION RECOMMENDATIONS

Agriculture production is highly dependent on water and increasingly subject to water insecurity and risks. The agricultural sector accounts for around 70% of water used worldwide (FAO, 2016). The increasing pressure on freshwater is generating a dramatic gap between water supply and demand, the deterioration of water quality and a growing competition between sectors and actors (State and non-State) in water-stressed countries. The steadily increasing competition and demand is threatening the right to water and equity in access to benefits generated from water use for economic productive purposes. Thus rules and regulations are becoming subject to conflicts between actors, sectors and scales. The drivers of change for water are accelerating, thereby forcing decisions to be taken to respond to increasing uncertainty exacerbated by climate change impact. Mediterranean Countries are still torn between old and new water policies, and water shortage experience is not related only to increasing demand, but also to poor infrastructure, management practices and lack of cooperation.

Within this framework, Non-Conventional Water (NCW)<sup>1</sup> represents a valuable alternative that can contribute to increase supply while controlling /capping demand in order to turn water scarcity into water security.

The development of guidelines and regulations for the safe use of NCW becomes a priority to ensure both health and environment safety, regulations which are still inconsistent or inadequate, lack of harmonization and then of confidence.

Despite sustainable water reuse strategies in agriculture are already implemented in many countries, several barriers (e.g., low efficiency of wastewater treatment plants, high associated costs as compared to conventional resources, negative public perception to consume crops irrigated with reclaimed water, administrative and legal gaps for the implementation of a regulatory framework, need for training specialized

<sup>1</sup> Non-conventional water resources: Total volume of water obtained through the development of new technologies. They are water generations (productions) that come either from desalination of sea and brackish waters or from wastewater regeneration for reuse. (FAO glossary). Drainage water in agriculture could also be included in the definition



technicians in the field, banning of some irrigation techniques with TWW by governments,...) still prevent the implementation of water reuse on a regional scale . A joint effort is crucial to overcome these impediments, allowing the adoption of water reuse strategies on a larger and more effective scale, thus increasing their innovation potential in terms of technologies and alternative approaches.

The panel session, organized by the Desertification Research Centre at the University of Sassari (NRD-UNISS), the Mediterranean Agronomic Institute of Bari (CIHEAM BARI) and the International Water Management Institute (IWMI), aimed at tackling water insecurity in the Mediterranean region by fostering shared knowledge and experiences on NCW governance through the promotion of innovative technologies and reuse strategies in agriculture.

The panel session started by presenting the following case studies developed in Arab countries:

- Enhancing treated wastewater quality and raising the water use efficiency: the case of MENAWARA project;
- Mainstreaming wastewater reuse in the MENA region: the case of Re-Water MENA project.

A debate followed to deepen the nexus between research, cooperation, and governance by providing regional perspectives thanks to the participation of high level representatives of Institutions involved in water management and governance, thus providing a valuable opportunity to discuss Institutions' capacity to address current and future water challenges, strengthening and enhancing a transboundary cooperation that is paramount to ensure sustainable Arab water security.

Following the presentation of case studies and the debate, the following key messages were highlighted:

- the application of the concept of the “fit-to-purpose” approach in water reuse, which entails the production of reclaimed water quality that meets the needs of the intended users considering technological options, financial implications, health risks mitigation, public perception and receptivity;
- regulations have to be drawn up with the cooperation and interaction of the authorities involved in water management to facilitate and guarantee their application;
- water reclamation is the last technological step before the use, so it is mandatory that the previous basic sanitation and treatment processes have been correctly carried out;

- the use and the selection of innovative techniques and the suitable irrigation systems using reclaimed waste water in agriculture to increase water efficiency;
- the active engagement of stakeholders to jointly develop and test new technologies (living labs);
- while TWW collection and treatment are advancing in Arab countries as in the other countries, Water Reuse has lagged behind;
- focus on new innovative techniques to increase water availability and quality such as managed aquifer recharge.

Panel session recommends:

- take advantage of lessons learnt during the implementation of research and cooperation projects framing good practices to support authorities involved in water management.
- deal with all different dimensions of NCW treatment and reuse (technical, institutional and governance) by adopting sustainable interdisciplinary approaches, involving different actors and stakeholders and focusing on policies that account for social, behavioral, political and economic constraints;
- ensure that the countries use reclaimed wastewater guidelines and establish proper local standards as regulation should not be a copy but an adaptation to the local context;
- build trust between public and governments regarding the collection, treatment and the use of reclaimed water;
- move from the concept of water supply to that of demand management giving an economic value to water: water scarcity issue is not yet perceived by people.