



# NEWSLETTER MEDISS PROJECT

Newsletter N°3

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## MEDISS PROJECT

### "MEDITERRANEAN INTEGRATED SYSTEM FOR WATER SUPPLY"

SIX PARTNERS



FOUR AREAS



TOTAL BUDGET:  
2.4 MILLION



EU CONTRIBUTION  
2.2 MILLION

PROJECT  
DURATION



01 AUGUST 2019  
31 OCTOBER 2022

MEDISS website

@MedissProject



MEDISS “Mediterranean Integrated System for water Supply” is a project financed by the ENI CBC MED Programme (Cooperation across border in the Mediterranean).

The project addresses thematic objective “B.4 Environmental protection, climate change adaptation and mitigation”, priority “B.4.1 Water efficiency”.

**Six partners** are involved in the project: Palestinian Wastewater Engineers Group and the Governorate of Jericho & Al Aghwar (Palestine), Aqaba Water Company (Jordan), Institute des Regions Arides de Médenine (Tunisia), University of Cagliari - CRENoS and the Sardinian Water Board - Enas (Italy).

### MISSION

MEDISS addresses improving the quality of saline groundwater present in the MED area, opening up alternative irrigation for higher quality and more diversified cultivations.

#### MEDISS **threefold objectives**:

- reduce water and soil salinity through the non-conventional water supply, reduce stress on groundwater and enabling high productivity and diversification of agricultural production;
- to support unconventional water solutions for agricultural use, to reduce water consumption and limit costs for water supply;
- to encourage the behavioural change of end-users toward the use of unconventional water in agriculture.





### 1) Pilots set-up and implementation:

MEDISS implements innovative solutions according to the specific needs of each area

In the **Jordan Valley (Palestine)**, MEDISS collects lost surface water in Wadi Quilt, blend it with saline water from artesian wells and Treated Waste Water from Jericho City and then use it to irrigate pilot areas.



In **Gabès (Tunisia)**, MEDISS upgrades the existing pilot plant (8 ha) for tertiary treatment through infiltration percolation and tests an innovative filter bed of clay.



In **Arborea (Italy)**, identified as a Nitrate Vulnerable Zone (NVZ), MEDISS develops a prototype for ammonia stripping from waste sludges to produce fertilizers in a plant equipped with biogas cogeneration.



In the **Governorate of Aqaba (Jordan)**, innovative approach for the desalination plant of brackish groundwater, extending membrane's lifetime with the innovative treatment of using photovoltaic panels for energy supply.



### 2) Analysis and monitoring

MEDISS evaluates the impact on water, soils and crops during and after pilot tests, identifying up-scaling opportunities and elaborating solid proposals for future funding.

### 3) Awareness Programme and communication activities:

Close cooperation with farmers to comprehend the respective territories' needs and transfer the know-how to work soil and water adequately, preserving their quality. Promote exchange, development and good practices in non-conventional water supply.

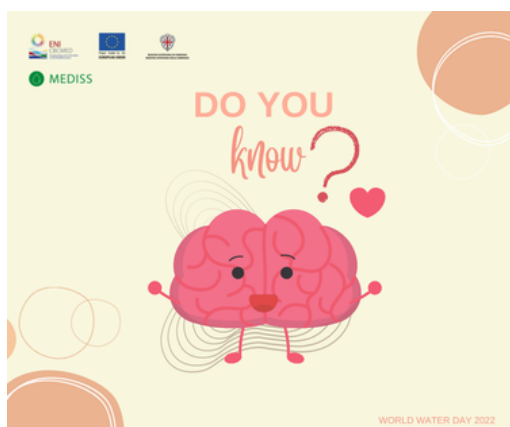
In order to reverse the logic behind the extraction of resources to a point of “maximum efficiency” MEDISS project develops a special programme aimed at involving all the actors present in the territory: the **awareness programme**.

The awareness programme operates in rural areas and is based on 4 key actions:

- collecting information on all types of barriers, so as to overcome any cultural resistance to the use of unconventional water resources
- raising awareness of the correct use and exploitation of water resources
- creating a synergetic action involving and empowering all the actors present in the territory (including producers and consumers) to the methods and the work that involves the final products that will be purchased
- supporting community-led local development strategies by operating with local authorities in order to act on different levels of awareness and reverse the logic behind the extraction of resources to a point of "maximum efficiency" (which is the key point of the whole project).



*The awareness initiatives stressed the end - users reluctance toward non-conventional water resources and the complexity of introducing Best Agricultural Practices, starting from local farmers' cooperatives.*



Awareness programme in Palestine consisted of a series of meetings with MEDISS beneficiaries in Jericho, represented by the Palm Farmers Cooperative Association (PFCA). Palm Farmers Cooperative Association (PFCA) is a specialized agriculture cooperative for date palm growers in Jericho and the Jordan Valley. PFCA seeks to support the Palestinian agriculture development and supports date palm farmers, small producers in particular, with a view to improve economic, social, cultural, environmental conditions.

Meeting are hosted by the Governorate of Jericho & Al-Aghwar, MEDISS partner, which expressed to farmers the necessity of their support and involvement in the project for its success and sustainability.

## THE AWARENESS PROGRAMME - JORDAN

All MEDISS partners are actively involved in the implementation of the programme. Jordanian partner, Aqaba Water Company, organized and facilitated six Awareness Session for farmers, Tenth Secondary Mixed School management, teachers and students in the city of Aqaba, Jordan.

The most interesting topics considered by the attendees were: the proportions of drinkable water, how to use it correctly, the amount of water used in our daily habits, and the extent of the possibility of changing attitudes to contribute to saving water.



The Awareness Session gave the participants an understanding of the main water challenges in Jordan. In addition, the session gave the participants all the information about the MEDISS project, how it's essential to the agricultural sector in Wadi Araba (Jordan), and how to use water efficiently.



CRENoS and ENAS are in charge of the organization and implementation of 6 awareness sessions in Italy, also online, in which experts from agronomy, soil science and environmental science shall deliver presentations supported by facilitators.

In Italy, the Awareness Programme operates mainly in the agricultural district of Arborea (Sardinia).



In this area, the role of the MEDISS project results within the initiatives underway to strengthen environmental sustainability and the competitiveness of the production chain in the agricultural district was the focus of a wide-ranging listening and discussion phase with the institutional and entrepreneurial players in the area.

Nevertheless, the Awareness Program included workshops with local stakeholders in the surrounding areas when justified by specific conditions.

The 2nd and 3rd Awareness sessions activities were carried out in Santu Lussurgiu, 50 km distant from Arborea, to raise awareness on the Mediss issues, focusing on the young / very young target. All sessions are an opportunity to test some lines of action of the MEDISS Capitalization Plan. Awareness sessions meet the objectives of Capitalization Plan relating to "Building bridges with relevant projects".



MEDISS italian partners participated in several international conferences and meetings.



The main issues MEDISS deals with in Tunisia are the semi-arid environment, the low quality of treated water, the low income of local farmers, and the cost of water resources (treated, for human or agricultural use).

With a view to raising awareness but also to assess the upscaling options of the plant, the IRA team created a fruitful dialogue with the local farmers involved in the experimental work.



Farmers have been actively involved both in setting up the facility and in its management, including the testing and monitoring phase of the results: they are the ones who take care of it and make it operate and conduct the testing together with IRA researchers.

The farmers also described the critical situation with respect to water resources that they have to face in the management of their agricultural activity and their understanding of the worsening scenario linked to climate change.

Farmers are now more aware of the critical issues with respect to water resources they face in managing their farming operations and the worsening scenario related to climate change.



**Palestinian Wastewater Engineers Group** (PWEG), the **lead partner** of MEDISS project, is a technical Non Governmental Organization (NGO) founded in 2002.

PWEG's main fields of interest are water, wastewater, food security, renewable energy and institutional support, with *Clean Environment* as a slogan. PWEG has 3 offices: the headquarter office in Al Bireh, Ramallah and Al Bireh Governorate – Palestine and two branch offices in Jenin and Tubas Governorates – Palestine. PWEG supports local authorities in protection of the environment by assisting in planning, designing, fund raising and managing environmental projects, this includes also research and capacity building.

**Aqaba Water Company (AW)** was established in August 2004 in the Governorate of Aqaba with financial and administrative independence and rules. Moreover, it is the first commercial water



services company in Jordan that has been entrusted with the managing water and sanitation resources in its coverage area. The aim of Aqaba Water Company in MEDISS Project is to contribute to the development of the remote area of Al Risha as by improving the quality of drinking water. How?

- Developing community related to drinking water services
- Strengthening the relationship between the Aqaba Water Company and the European Union.
- Creating new opportunities for future projects in order to developing Aqaba Water Company service area.



**The Governorate of Jericho & Al Aghwar (GoJ)** was established in 2005, in Jericho - West Bank (Palestine).

The aim of the Governorate of Jericho is to implement the public policy of the State of Palestine and to supervise the production and service facilities within the governorate boundaries.

The objectives of the Governorate of Jericho & Al Aghwar (GoJ) are:

- To achieve economic, urban and social prosperity, carrying out equality and justice.
- To supervise and patronize health, social, cultural, educational, and urban development.
- To provide economic and social protection to the poor and needy who suffer from the disruption of the resources and care for people with special needs.





**CRENoS** was established in 1993 by economists of the Universities of Cagliari and Sassari (Italy). Since 2000 it is a section of the Interuniversity Centre for Economic Research and Mobility (CIREM), which is administered by the Department of

Economics and Business - University of Cagliari. It involves 27 Researchers, 46 Associated researchers, 4 Doctoral students, 2 post-doc Fellows and 9 Research Assistants. The Centre is in charge of developing the Awareness Program in which a senior facilitator will coordinate the work of local facilitators (1 per area), analyse the needs assessment results and collect final reports from awareness sessions. CRENoS is responsible for project communication. Two professors of University of Cagliari – CRENoS, expert on socio – economic analysis, are also involved in the activities of technical Board of Experts (BoE).

**ENAS - Ente Acque della Sardegna** (Sardinian Water Board) is the Sardinian operating entity that manages the Sardinia's multi-sectorial water system composed of various water collection and distribution works. Established in 2006, the Board's activities are based on the principle that water is a precious and limited resource with enormous environmental, cultural, and economic value to be protected. In this regard, the Board has been working towards the achievement of the highest standards possible for the water delivered. Its efficiency can be correctly maintained through



**ENAS Sardegna**

one of its specialized structured - the current Delivered Water Quality Service (SQAE) - provided with its own laboratory equipped with avant-garde instrumentation. ENAS has designed and constructed large water infrastructures for the long-term development of the Sardinia, guaranteeing water supply to urban, agricultural and industrial areas, in a typical Mediterranean semi-arid region.

In MEDISS ENAS coordinates the activities of the WP3 with the support of the technical Board of Experts (BoE). Moreover, ENAS is in charge to coordinate quantitative and qualitative water analysis and soil study and analysis.



**Institut des Régions Arides de Médenine (IRA)** Created under the term of the law No. 76/6 of 7 January 1976, IRA conducts the research needed to develop the agricultural sector, the protection and preservation of natural resources and the fight against desertification in arid and desert regions. Ira main mandate are undertake researches for the development of the agricultural sector, conservation of natural resources and combating

desertification in the dry areas, training and capacity building of technicians and specialists in dry land agriculture and combat desertification, provide assistance and expertise for the development projects in the area. IRA has five laboratories whose the main missions are: Inventory and monitoring of desertification, Wind erosion and sand encroachment control, Conservation and valorization of water and soil resources, Desertification monitoring and climate change impacts, Development of water saving and management techniques and Improve of soil physical and chemical characteristics.

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This publication 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 CRENoS and can under no circumstances be regarded as reflecting the position of the European Union or the Programme management.

The 2014 2020 ENI CBC Mediterranean Sea Basin Programme is a multilateral Cross Border Cooperation (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.enicbcmcd.eu](http://www.enicbcmcd.eu)

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