



NEWSLETTER MEDISS PROJECT



Newsletter N°4

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MEDISS PROJECT

"MEDITERRANEAN INTEGRATED SYSTEM FOR WATER SUPPLY"

SIX PARTNERS



FOUR AREAS



TOTAL BUDGET:
2.4 MILLION



PROJECT
DURATION



EU CONTRIBUTION
2.2 MILLION

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.

The Capitalization Plan is a strategic document, developed during the 2nd and 3rd year of the project to promote the transferability and exploitation of the MEDISS experience in other projects or initiatives after project's completion.

The Plan guides MEDISS partners on identifying synergies, optimizing the impact of MEDISS project and involving final beneficiaries and stakeholders in activities.

In brief, the capitalisation & dissemination process is an activity in which project partners and beneficiaries are involved in a common process of valorisation and dissemination of experiences which aims to:

- Identify good practices emerging from the projects
- Encourage exchange between projects
- Integrate good practices in the development strategies of the territories
- make the knowledge assets generated by the project more accessible, thus improving the transfer of knowledge
- promote the re-use and transfer of this knowledge assets
- use the pilot experiences results to develop a project at industrial level
- use the knowledge gained in the projects for the planning phase of future cooperation programs and upscaling of pilot projects.

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Highlighting the best results that have emerged during implementation at both country and transnational level on the basis of three main criteria: relevance, sustainability and transferability. Knowledge of the results will help partners in mainstreaming and capitalisation activities.

THE CAPITALIZATION PLAN IN ITALY - RESULTS TO BE CAPITALIZED

The pilot plant that was built in Arborea meets the two objectives of reducing the impact of ammonia in water and on the soil and of producing low-impact fertilizer for agriculture.

The next goal is to create an industrial-scale plant given the large amount of raw material available in the cooperative for treatment and the opportunity to have numerous farmers and breeders in need of fertilizer.

THE CAPITALIZATION PLAN IN PALESTINE - RESULTS TO BE CAPITALIZED

In Jericho, best results are summarized in:

- Reducing stress on ground water by blending the surface lost wadi water with treated wastewater.
- Take advantage of the surplus treated wastewater during winter by collecting it in the mixing pond.
- Improving the quality of irrigation water by reducing salinity specially during summer season when artesian wells become more saline

THE CAPITALIZATION PLAN IN JORDAN - RESULTS TO BE CAPITALIZED

In Jordan, to focus on the results of raising the quality of drinking water that serves the region in Wadi Araba (Al Risha) by reducing salinity.

On the other hand, we should focus on how the brackish water will be reuse for agricultural purposes.

THE CAPITALIZATION PLAN IN TUNISIA - RESULTS TO BE CAPITALIZED

In Tunisia, we focused our first studies on the analyzes of soils irrigated by treated wastewater for different periods (1;7 and 15 years) and this for the summer and winter period to better understand the behavior and evolution of the soil structure. These results are the subject for the tracing of a future strategy for the irrigated perimeter.

The second study concerns the improvement of the physico-chemical and bacteriological quality of wastewater treated by the installation of an experimental process of percolation infiltration. a follow-up of the various parameters is carried out and the results obtained will be the object of the optimization of the purification efficiency of the system for a possibility of enlarging this type of treatment.

The results of cooperation projects financed by the European Union have been obtained using public resources and, since they are the result of a virtuous process of exchange and cooperation between partners of different natures and countries, they have innovative and replicable features that are not always found in projects financed on a regional or national scale.

An essential stage of the capitalisation process is to support and stimulate, in a focused way, the transfer and reuse of what has been achieved.

The aim is not an informative activity, but an operation aimed in practice at intercepting the categories of subjects that are most likely to be interested in what has been produced so far by MEDISS projects and that, on the basis of their respective competences and fields of activity, can:

- replicate, with the necessary adaptations, what has been achieved by MEDISS in another territorial area;
- transfer the know-how acquired, often through pilot experiments, to a larger scale or at a more general level;
- re-using the outputs produced and integrating them, updating them, increasing their effectiveness, producing additional results.





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

مياه العقبة
Aqaba 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 (CIEM), 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 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.



ENAS Sardegna

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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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.