

NEWSLETTER MEDISS PROJECT



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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 JULY 2022

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 (Tunisia), University of Cagliari - CRENoS and Enas - the Sardinian Water Board (Italy).



MISSION

MEDISS addresses the issue of improving the quality of saline groundwater present in the MED area opening up alternative irrigation for higher quality and more diversified cultivations. Specific Objectives are threefold: to reduce water and soil salinity through non-conventional water supply, reduce stress on groundwater and enabling high productivity and diversification of agricultural production; to support non-conventional water solutions for agricultural use, to reduce water consumption and limit costs for water supply; to encourage behavioural change of end-users toward the use of non-conventional water in agriculture.

According to the features and specific needs of the partner areas - Palestine (Jordan Valley), Jordan (Aqaba Governorate), Italy (Arborea) and Tunisia (Gabès) - MEDISS will test innovative solutions in the use of treated wastewater and desalination of brackish water. The results and lessons learned will be disseminated at the MED level with an ad hoc communication strategy to facilitate transfer and capitalization in other countries and in other sectors. In the long term, the project will contribute to a sustainable water balance in MEDISS areas, increasing resilience to water stress and climate change. The pressure on primary water resources and the costs for water supply will be reduced. Local communities and institutions will benefit from the results of the project thanks to the network of professionals / experts of the MEDISS Project that will facilitate the exchange of experiences and good practices in the international area.



WPs

MEDISS project is organized in five work packages (WPs), each of which represents a coherent set of activities. The five WPs have been scheduled to interact coherently with one another:

- **WP1 - Management**
- **WP2 - Communication**
- **WP3 - Analysis and monitoring**
- **WP4 - MEDISS pilots set-up and implementation**
- **WP5 - Awareness and Networking**



WORK PACKAGE 1: MANAGEMENT

WP1's objective is to guarantee a sound management of MEDISS ensuring quality standard in reporting and coordination.

WORK PACKAGE 2: COMMUNICATION

WP2 aims at assuring constant communication to and with local stakeholders on MEDISS activities and results, disseminating MEDISS achievements and promoting its future exploitation in synergy with other initiatives and relevant stakeholders.

WORK PACKAGE 3 - ANALYSIS AND MONITORING

WP3 embraces the whole project and it aims at collecting relevant and consistent baseline data in the 4 MEDISS areas. In particular: analyzing and organizing data in a comprehensive database; providing target values and monitoring tools; evaluating MEDISS impact on water, soils and crops during and after pilot tests; identifying up-scaling opportunities and elaborating solid proposal for future funding.

WORK PACKAGE 4 - MEDISS PILOTS SET-UP AND IMPLEMENTATION

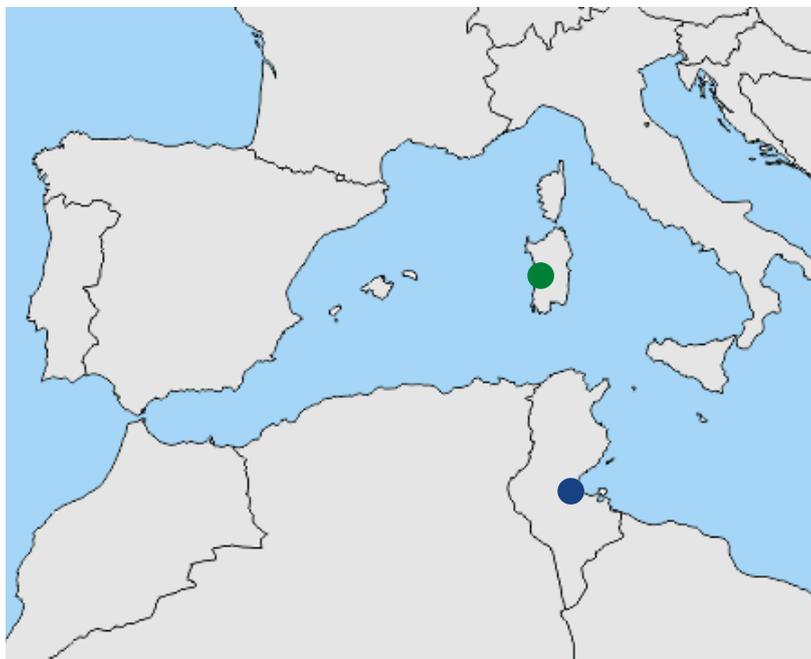
WP3 baselines surveys provide technical directions for **WP4** Pilot initiatives set-up and represent reference values to monitor and evaluate their impact. Innovative solutions for non-conventional water supply will be implemented in the 4 areas of the project, with the oversight of the Board of experts.

WORK PACKAGE 5 - AWARENESS AND NETWORKING

WP5's objective is threefold: getting support and active engagement from identified target groups on water management by raising their awareness on the theme (sustainable, non-conventional water supply); promoting exchange, development and uptake of good practices on non-conventional water supply at cross-border level; enabling efficient application of MEDISS innovative solutions for local institutions and local communities.

In order to address the problems of the Mediterranean areas involved in the project, MEDISS experiments new innovative solutions in 4 Mediterranean pilot sites.

In particular:



Arborea (Italy)

In Arborea, MEDISS develops a prototype for ammonia stripping from waste sludges to produce fertilizers, in a plant equipped with biogas cogeneration.

Gabès (Tunisia)

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

Jordan Valley (Palestine)

In the Jordan Valley, 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.

Governorate of Aqaba (Jordan)

In the Governorate of Aqaba, innovative approach never tested before in the Middle East is applied to desalination plant of brackish groundwater, extending membrane's lifetime with innovative treatments and using photovoltaic panels for energy supply.





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 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.



PREVIOUS EVENTS

MEDISS kick-off meeting. The first kick-off meeting was held at the University of Cagliari (Italy) on 21st and 22nd of October 2019. Partners presented their organisations, the members of the Board of Experts and Data Collection Plan. A Training for facilitators, Communication Meeting and Study visit to Arborea took place.

Technical meetings concerning pilot areas with local stakeholders and beneficiaries. During the first year of the project, there have been several technical meetings, also with local project stakeholders and beneficiaries, to discuss about the expected impact of the MEDISS project in the four pilot areas.



Training course for MEDISS facilitators: Aqaba, 20-22 January 2020. MEDISS partners brought together in Aqaba their facilitators for a training course held by Prof. Aide Esu (CRENoS), MEDISS senior facilitator.

Skype meetings for facilitators with Prof. Aide Esu - CRENoS. The aim of these meetings is to discuss in details the activities under Work package 5 "Awareness and Networking".

Web meetings of the Board of Expert

The meetings were attended by representatives of all partners. The Board of Experts discussed the state of play of the socio-economic indicators, data collection on water and soil, and use of QGIS.



UPCOMING EVENTS

Bilateral meeting between Tunisia and Italy (postponed due to COVID-19). Some project activities are heavily affected by the situation. One of this is the bilateral meeting organised in February. After careful consideration, the partners decided to postpone the event due to COVID-19 pandemic outbreak. The new proposed date is October 2020.



MENAWARA

Project MENAWARA aims to enhance access to water through the wastewater treatment 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. MENAWARA shares with MEDISS the Italian pilot site (Arborea), that has already enabled a series of collaboration opportunities.

Re-Live Waste: the project focuses on the development of an effective management technique for nutrients in excess within circular economy activities. In particular, it tests innovative plants to recover nitrogen and phosphorous under the form of a precious struvite-based fertilizer. Arborea is the Sardinian pilot site, where livestock waste has been (and is) a major source of pollution, in particular, water pollution.



Project AQUACYCLE is set to bring an eco-innovative wastewater treatment technology that will consist of anaerobic digestion, constructed wetlands and solar treatment for the cost-effective treatment of urban wastewater with minimal operational costs and maximum environmental benefits.



AQUACYCLE

Sardinian Action Programme for Nitrates Vulnerable Zones (NVZ): the main goal of this Programme is to develop an integrated system for the identification and monitoring of NVZ also useful to support regional planning actions through spotting opportune mitigation strategies against nitrates pollution phenomena. This programme is being carried out by the Sardinian Agricultural Agencies and their detailed study confirms Arborea in the NVZ. The collaboration with the regional agencies has already enabled a series of opportunities for the information gathering and policies analysis.



**REGIONE AUTONOMA DE SARDIGNA
REGIONE AUTONOMA DELLA SARDEGNA**

"ENI CBC MED PROGRAMME PROMOTES A STRONGER COOPERATION WITH ALL EU PROGRAMMES IN ORDER TO IMPROVE THE OVERALL QUALITY OF PROJECTS, ENABLE EXCHANGE OF EXPERIENCES AND TRANSFER OF PRACTICES ON SPECIFIC TOPICS"



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