



MEDISS project "Mediterranean Integrated System for Water Supply"

A project financed by the ENI CBC "Mediterranean Sea Basin Programme"

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MEDISS works to improve the quality of saline groundwater in the MED area, opening up alternative irrigation for higher quality and more diversified cultivations.

Four countries involved:

Palestine, Italy, Jordan, Tunisia

MEDISS threefold objectives:

- reduce water and soil salinity, diminish stress on groundwater, and enable high productivity and diversification of agricultural production;
- support unconventional water solutions for agricultural use, reduce water consumption and limit costs for water supply;
- encourage end-users behavioral change into the adoption of unconventional water in agriculture.



Three main activities

1) Pilots set-up and implementation:

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

In **Italy**, MEDISS develops a system for ammonia stripping from waste sludges to produce fertilizers in a plant equipped with innovative permeable gases membranes. In **Tunisia**, MEDISS upgrades the existing pilot plant for tertiary treatment through infiltration percolation and tests an innovative filter bed of clay.

In **Palestine**, MEDISS collects lost surface water, blends it with saline water from artesian wells and Treated Waste Water TWW and uses it to irrigate pilot areas. In **Jordan**, MEDISS extends the 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

Policy focus

International cooperation and technology transfer supported by a capacity building can boost the global diffusion of technologies, practices and policies for **water management** and **climate change risk mitigation**.

MEDISS provides policy indications for decision-makers facing the shift in production paradigms tied to the **ecological** and **energy transition**, and the search for more **resilient** set-ups regarding the emerging competitive scenarios.

A region that aims to be **fair, green and competitive** is a framework that overcomes boundaries between environment, energy, economy, competitiveness and innovation policies.



It is necessary to redefine the models of protection and management of common goods. Decision-making processes must not focus on the bottom line of the single company or on passing on the costs of adaptation to the community but instead on the local players' environmental, social and governance responsibilities.

The results of the MEDISS pilot project can be immediately exported to regions with evident **water scarcity**, **salinisation**, or **groundwater pollution** caused by nitrates from agricultural activities, providing both public and private businesses with

- know-how on the use of TWWs, even by combining traditional technologies with low management costs to promote their diffusion in less developed areas;
- technologies for the extraction of fertilisers processing zootechnical waste;
- renewable energy sources spread in the agriculture and the water resource management cycle.

