MED-WET is a 3-year project under which three low-cost, lean solutions for the irrigation of crops and fruit trees are tested in pilot sites in Portugal, Malta (Gozo), Morocco and Egypt. The MED-WET consortium is led by Hochschule Wismar (Germany), and supported by partners from Heliopolis University for Sustainable Development (Egypt), Institut National de la Recherche Agronomique du Maroc and Sultan Moulay Slimane University (Morocco), University of Beira Interior and Municipality of Fundão (Portugal), Malta College of Arts, Science and Technology and the EcoGozo Directorate (Malta).

PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

PRIMA programme is supported by Horizon 2020, the European Union's Framework Programme for Research and Innovation.

https://www.medwet-eu.com/

med-wet@hs-wismar.de

0049 3841 753-7649

Hochschule Wismar
University of Applied Sciences
Technology, Business and Design
Philipp-Müller-Straße 14
Haus 21 · Raum 202b
23966 Wismar, Germany

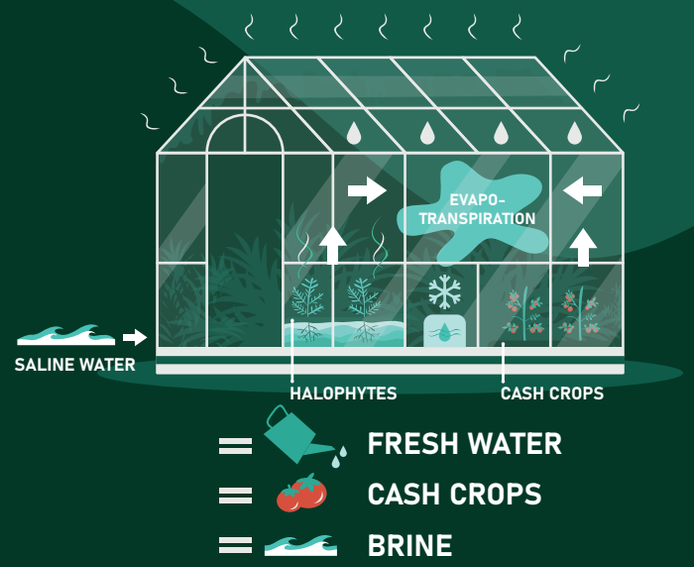
Find MED-WET on:

MED-WET

IMPROVING MEDITERRANEAN IRRIGATION AND WATER SUPPLY FOR SMALLHOLDER FARMERS BY PROVIDING EFFICIENT, LOW-COST AND NATURE-BASED TECHNOLOGIES & PRACTICES

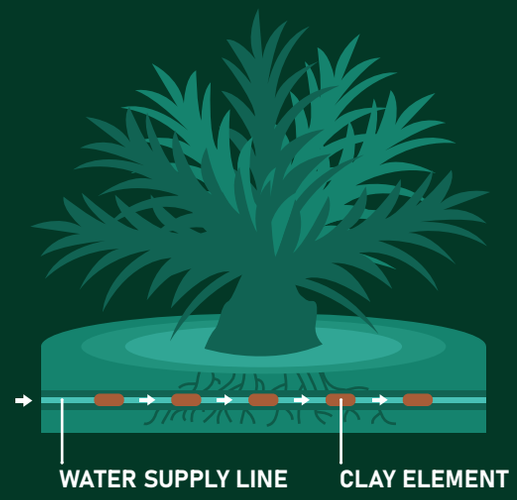
SOLAR DESALINATION

This technology consists of a solar desalination greenhouse (SDGH) which converts saline water into freshwater for irrigation. The desalination process relies on halophytes, which are plants adapted to growing in saline conditions and which humidify the air inside the greenhouse. The SDGH consequently produces fresh water by passive dehumidification, requiring no energy to extract fresh water. Higher yields can be obtained with active condensation, through the use of powered cooling devices. This technology has the added value of halophyte production, which have a high market value and health benefits, as well as the generation of sea salt. The technology is advantageous in its flexibility in capacity, moderate installation and operating costs, simplicity, and the use of renewable energy (including solar energy). This technology is piloted in Gozo (Malta).



SELF-REGULATING, LOW ENERGY, CLAY BASED IRRIGATION (SLECI)

SLECI is a subsurface irrigation technique that uses the actual suction force of the surrounding soil for regulation of the system's water release. Water is transferred to the soil via clay elements placed at a determined depth next to the crop roots. The system requires a low hydraulic pressure and the amount of water released depends on factors such as the soil type and the soil moisture content. When the surrounding soil is dry, the suction tension increases and the system will deliver a higher volume of water.



The concept, production and installation of the technology are simple and thus adaptable to rural environments. This technology is piloted in Gozo (Malta), Portugal and Morocco.

CONSTRUCTED WETLAND TREATMENT

This technology explores the use of constructed wetlands, which are engineered systems that use native weeds, soils, microorganisms and aeration weirs to remove contaminants such as nitrogen, phosphorus, heavy metals and pathogens from wastewater by mimicking processes in natural wetland ecosystems. This nature-based technology can be used to increase the availability of water resources for irrigation, particularly in rural and desert communities as it is low-cost and does not require energy or sophisticated machinery. Constructed wetlands are efficient in treating municipal effluents, agricultural drainage, and animal waste and can be of great value to remote communities. This technology is piloted in Egypt.