

WaterReTUNe



Foto: © L'art des Jardins

WaterReTUNe Wastewater Reuse in Tunisia



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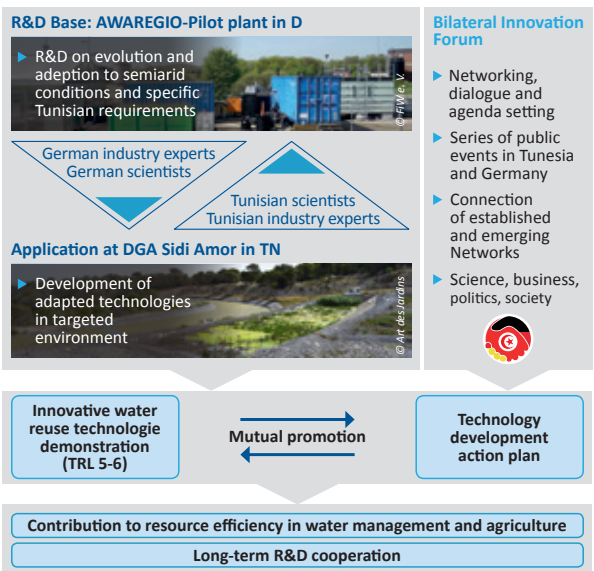


Federal Ministry
of Education
and Research

PROJECT IMPULSE

Due to population growth, climate change and the degradation of water quality it is becoming increasingly difficult for Tunisia and other countries in the Maghreb region to meet the demand for fresh water resources required for agriculture and food processing. Hence, developing approaches enabling the widespread and diversified exploitation of the great potential of wastewater reuse in a sound, safe and sustainable manner is an urgent need. Elevated salt concentrations in wastewater, quality concerns, decentralized applicability and economical compatibility are major challenges for exploitation of this potential.

With WaterReTUNe, the follow-up of the BMBF-funded project AWAREGIO, the transfer of the research results developed in Germany for wastewater reuse in semi-arid regions of Tunisia is realized.





PROJECT TEAM

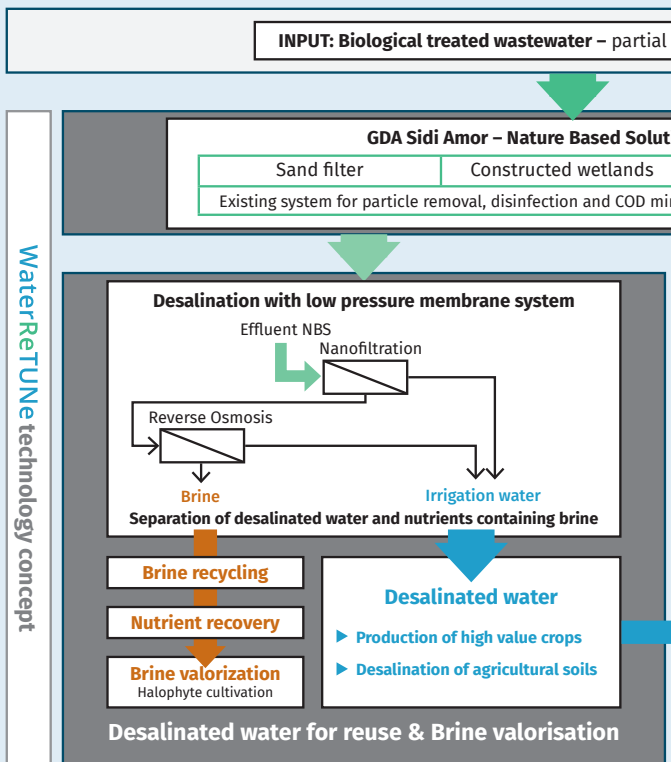
WaterReTUNe combines FiW's wastewater treatment experience with CERTE's extensive expertise in membrane desalination techniques as well as integrating Terra Urbana' knowhow in aquaponics and L'art de Jardins experience in horticulture

For support of the implementation of the WaterReTUNe concept in form of a pilot plant in Tunisia, following associated partners are part of the team

- **Groupement de Développement Agricole (GDA) Sidi Amor**
- **Institut National Agronomique de Tunisie (INAT)**
- **Office National de l'Assainissement (ONAS)**

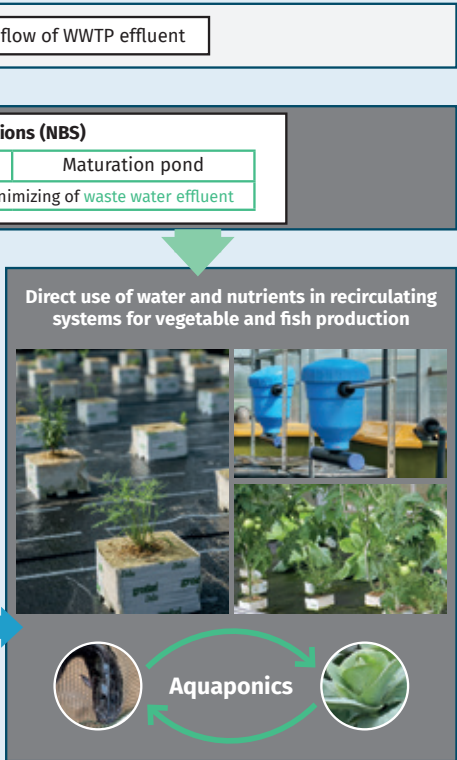
PILOT PLANT IN TUNISIA – DESALINATION AND AQUAPONICS IN FOCUS

In WaterReTUNE, innovative technologies for recycling of biologically treated wastewater are developed and demonstrated. The aim is to use a combination of Nature Based Solutions (NBS), a membrane treatment system for the production of high-quality reuse water, innovative brine treatment for nutrient recovery and a cycle-based aquaponic production to create a process chain for the diversified agricultural use of purified wastewater in Tunisia.



BILATERAL INNOVATION FORUMS – STRATEGY TO PROMOTE WATER REUSE IN TUNISIA

In Innovation Forums, the established networks of research partners FiW and CERTE are linked to the emerging networks of business partners TERRA URBANA and “L’art Des Jardins”. Together with representatives from science, politics, business and society, the research results as well as the general potentials and difficulties of wastewater reuse in Tunisia are discussed in order to define further arising research questions as well as possibilities for market launches.

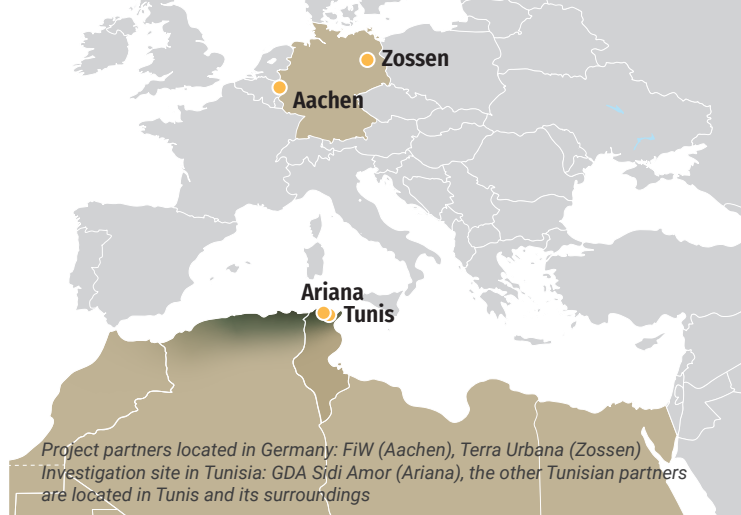


Technical concept

OVERALL PROJECT GOALS

1. Development and installation of pilot plant at GDA Sidi Amor to demonstrate
 - a. economic suitable desalination of treated wastewater
 - b. economical aquaponics systems for Tunisia
 - c. semi decentral applicability
2. Demonstration of multibarrier- approach to get a maximal removal of pollutants
3. Demonstration of the cultivation of crops with added value by irrigation with desalinated water
4. Demonstration of halophyte cultivation with brine solutions





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PROJECT PARTNERS



ASSOCIATED PARTNERS



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