Demonstrating integrated innovative technologies for an optimal and safe closed water cycle in Mediterranean tourist facilities

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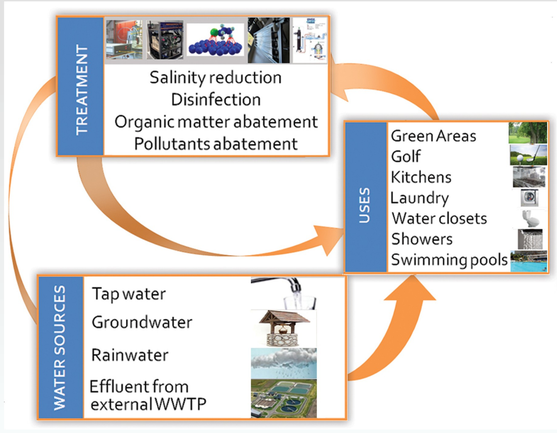
demEAUmed Objectives

The aim of demEAUmed project is the involvement of industry representatives, stakeholders, policy-makers and diverse technical and scientific experts to demonstrate and promote:

- Integration of **innovative water treatment technologies** for an optimal closed water cycle in Mediterranean tourist facilities
- Fresh **water consumption minimization**
- **Safe water management**
- **Monitoring, control and automation** of water cycle.
- **Dissemination** to other **Euro-Mediterranean tourist facilities**
- Creation of **new market opportunities** to European industry and SMEs.

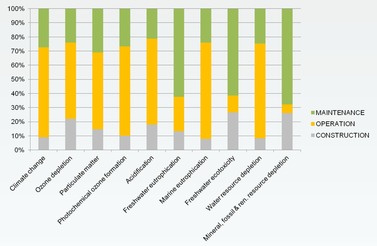


Integrated technologies

Eight different categories of innovative technologies together with a monitoring, control and decision support system will be integrated and demonstrated on the demonstration site:

- **Greywater treatment line**: Solar Photoelectro Fenton process (LEITAT), Smart air MBR (ICRA), Vertical Ecosystem (Alchemia nova), Plimmer technology (Idropan- Dell'Orto)
- **Wastewater treatment line**: Electrocoagulation flotation technology (LEITAT) , Smart air MBR (ICRA), Electrochemical ozonation (FHF), Removal of micropollutants by adsorption processes (SICO).
- **Swimming pool water treatment line**: UVOX technology (UNESCO-IHE).

Environmental impact assessment of Electro Coagulation - Electro Flotation technology



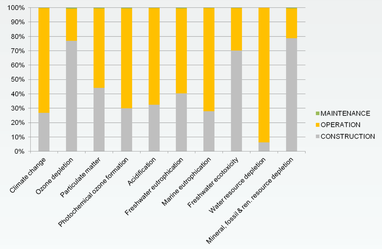
Electro Coagulation-Electro Flotation (ECEF)

- **COD (< 500 mg/l)** and **turbidity (<100 NTU)** reduction before MBR treatment.
- **Energy consumption** reduced below **8 kWh/m^3**
- **No** need for additional **chemical products addition**.

Solar Photo Electro Fenton (SPEF)

- Versatile treatment for greywater line.
- Elimination of micropollutants (**100% carbamazepine removal** accomplished).
- **50% COD reduction** for low input levels.
- Water disinfection.

Environmental impact assessment of Photo Electro Fenton technology



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