

GREEN DESALINATION

Making desalination sustainable

A closed-loop technology for full recovery of *water* and *raw materials* from the wastewater effluent

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Industrial Waste & Wastewater Treatment & Valorisation

Project Implementation

- Coordinator: Aephoria Network P.C.
 - Sub-contractors: Nationat Technical University of Athens

GReen Desalination (Start-up, to be founded)

- Image: Budget:
 71,430 €
 - EC contribution: 50,000 € (70%)
- Duration: 6 months
 - Start Date: 01/05/2015
 - End Date: 31/10/2015



Project objectives

 To provide a near-market solution to the complex issue of sustainable brine handling

The desalination process involves a lot of wastewater that is currently discharged into water bodies, causing environmental degradation, while its energy and resources content goes wasted.

- To improve the efficiency and overall costs of desalination;
- To recover raw materials that can be exploited in multiple markets (urban, agricultural, industrial use)



Energy exploitation potential in Process Industries



Freshwater Consumption in Industry



Global Industrial Water Demand, Break Down by Sector

Review on Zero Liquid Discharge (ZLD) Desalination (1990-2015)



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Benefits

- Water Energy Nexus: GReen desalination comprises an eco innovative ZLD technology that can provide a sustainable solution in water and energy intensive industries
- Recovered products: water and energy

These products can be recycled in the industries or exploited in process industries through establishment of industrial symbiosis concepts



Thank you

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