



# RELEACH

**Decreasing the environmental impact of waste management: An innovative leachate treatment using recovered membranes**



LIFE13 ENV/ES/000970

[www.releach.eu](http://www.releach.eu)

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Releach Group

## Life + RELEACH

Project Coordinator



Partners



## ENVIRONMENTAL PROBLEM TARGETED:

The whole European Union uses 16 tonnes of materials per person per year, which 6 of them become waste and half of them are disposed in a landfill.

On **2014 LIFE+ RELEACH** project started funded by the European Union under the LIFE+ program with the goal of innovating on waste treatment and management while promoting social awareness towards waste generation impact.

## OBJECTIVES OF THE PROJECT:

Existing leachate management processes require high amount of energy and chemicals reagents, which result in a high environmental and economic impact.

**LIFE + RELEACH** project mainly aims to develop an innovative treatment scheme, optimal for leachates coming from an old landfill site, while reducing the environmental and economic cost associated with their treatment. The steps from the new treatment scheme are: biological pre-treatment and low pressure filtration, reversal osmosis and nanofiltration step and finally a reversal electrodialysis to treat the concentrate fraction coming from the previous high pressure filtration.

One of the innovative key point of the project is the recovery of desalination plant membranes at the end of their useful life, reusing them in the process of leachate treatment. As a result, waste is transformed into a reusable resource and therefore, the volume of waste sent to landfill and the cost associated with the treatment is being reduced.

## PROJECT'S TASKS:

### A. Preparatory actions:

- A.1. Policy and legislation assessment
- A.2. Characterization of several leachates from different landfills

### B. Implementation actions:

- B.1. Process optimization and selection of the operating parameters
- B.2. Design and construction of the new landfill leachate treatment process
- B.3. Implementation and operation of the innovative landfill leachate treatment plant in Manresa Landfill
- B.4. Implementation and operation of the new old landfill leachate treatment plant in Orís landfill

### C. Monitoring of the impact of the project actions

### D. Communication and dissemination actions

### E. Project management and monitoring of the project progress