

## Commissioning of MVC technology to reduce the volume of concentrated brine

The development works of the pilot plant of the Life Desirows project continue with the installation of new equipment.

In recent weeks, MVC technology has been put into operation to reduce the volume of concentrated brine, which will subsequently enter a natural evaporation system with the aim of achieving zero discharge to the protected area of the Mar Menor Coastal Lagoon.

In addition to this thermal separation technology, the pilot plant has a cooling tower. The preheating of the brine is achieved by heat exchange with the help of a boiler fed with biomass, in this case olive stone.

The brine circulates through a coil located inside a tank that contains water at an approximate temperature of 60° C. After the heat exchange, the preheated brine enters the cooling tower where it takes advantage of evaporation and reduces its concentration.





# The director of the Mar Menor learns about the environmental advantages of Life Desirows



The general director of the Mar Menor of the Region de Murcia, **Víctor Serrano**, has visited the Life Desirows pilot plant to learn about the project and study the possible practical application of its environmental advantages.

Víctor Serrano was accompanied, among others, by the director of the Higher Technical School of Road, Canal and Port Engineering and Mining Engineering of the Polytechnic University of Cartagena, **Juan Tomás García Bermejo**, who explained how the facility works.

Also present at the visit was Francisco Gallego, CEO of Regenera, a partner that leads the Life Desirows project, in which the Polytechnic University of Cartagena, the Arco Sur Irrigation Community, Hidrogea and Hidrotec also participate.

The groundwater of the entire Mediterranean Basin, and specifically the Campo de Cartagena area, have high nitrate contents. These nitrates end up in the Mar Menor due to the direct arrival of flows through streams and runoff, in addition to damaging the quality of the aquifers.

The presence of these salts in fresh water from underground wells causes serious environmental damage. In the case of Campo de Cartagena, these waters used for irrigation end up pouring into the Mar Menor, unbalancing the natural values of this saltwater lagoon.





## PARTNERS

# UPCT: a university focused on research and new technologies

The **Polytechnic University of Cartagena** (UPCT) is a public and specialized polytechnic university, where students are prepared to pursue the most demanded careers.



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They train professionals for the present and for the future. Big Data, cybersecurity, robotics, automation, industry 4.0, IoT, electronic commerce or sustainable and environmental infrastructures such as those that are revealed in the Life Desirows program.

In short, learning in avant-garde topics together with theoretical and practical teaching of Engineering, Architecture and Business. They are characterized by the international projection of their students, their proximity to the business fabric, teamwork and teaching innovation.

The percentage of labor insertion within the first few months of being a holder rises to 91% among the graduates of our master's degrees.

<https://www.upct.es/>



The Polytechnic University of Cartagena was created by Law 5 of August 3, 1998, although university centers had already existed for decades. The UPCT has the following centers:

- Higher Technical School of Agricultural Engineering.
- Higher Technical School of Industrial Engineering.
- Higher Technical School of Telecommunications Engineering.
- University School of Civil Technical Engineering.
- University School of Naval Technical Engineering.
- Faculty of Business Sciences.

Affiliated centers as authorized by the law creating the UPCT:

- University School of Labor Relations.
- University School of Tourism.





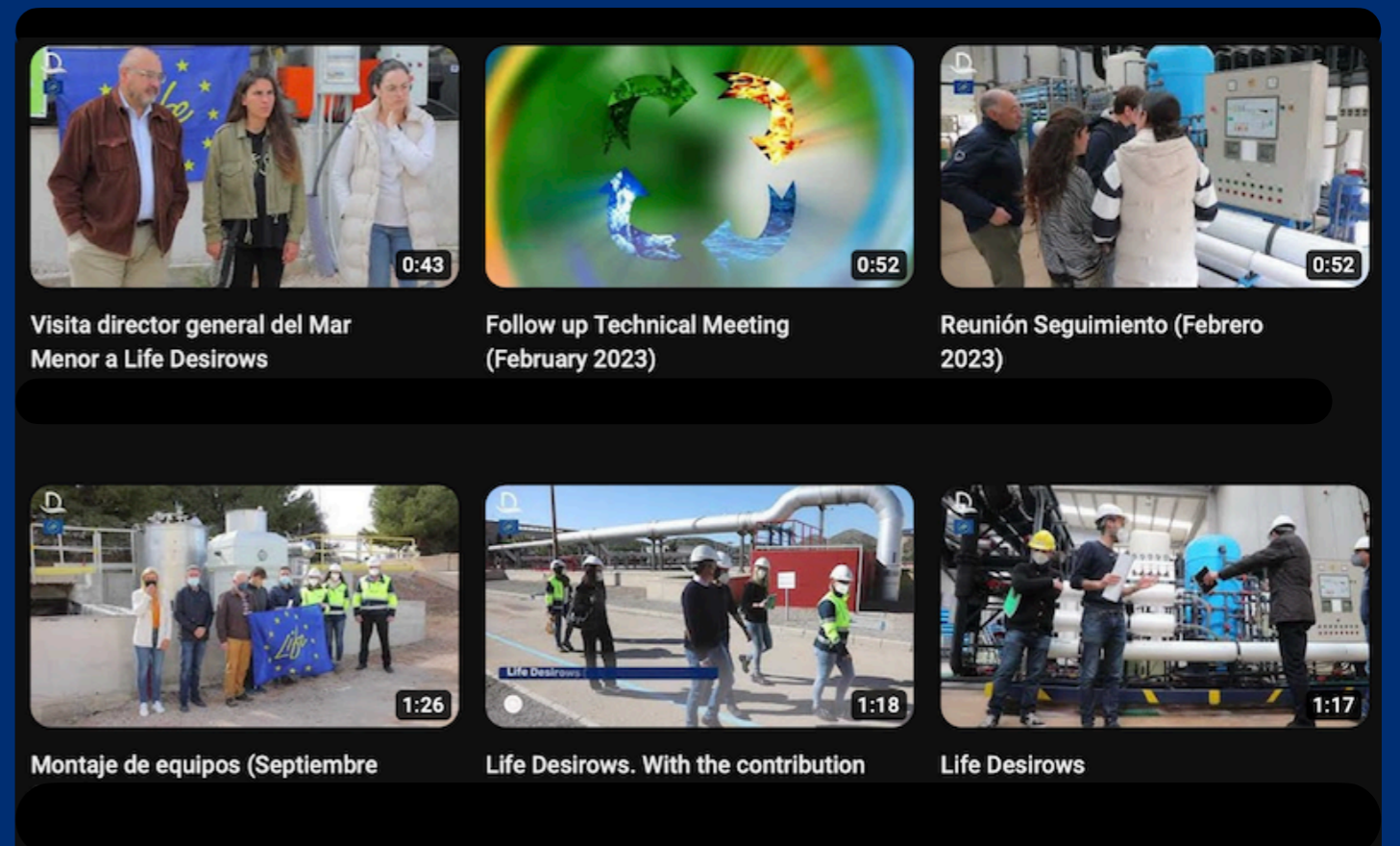
The Life Desirows project was the protagonist during the European Week for Sustainable Energy, which took place in Brussels. Project partners Ángel Molina, from the UPCT, and Víctor Fabregat, from Regenera, took advantage of their stay to visit the Brussels Office of the Region of Murcia and explain the project news to those responsible for this department.

## Follow us on Twitter and Youtube

If you want to be up-to-date with the project, you can follow us on our website:

<https://lifedesirows.eu/>

As well as on Twitter and Youtube:



## LIFE PROJECTS

### LIFE CLEAN UP: water purification with effective and environmentally friendly technology

One of the projects with which Life Desirows is carrying out joint networking and dissemination actions is the Life Clean Up project.

Emerging pollutants (ECs) that reach aquatic and terrestrial ecosystems through urban wastewater and effluents from Wastewater Treatment Plants (WWTPs) cause negative effects on ecosystem services.

The European LIFE CLEAN UP project aimed to improve water purification with efficient and environmentally friendly technology to obtain purified water free of ECs.

The main objective is to validate and demonstrate a system for the elimination of ECs and other pathogenic microorganisms that are not eliminated by current water management systems, causing a great environmental impact and on human health. Enable the transfer of the purification system to other industrial sectors. Raise awareness about emerging pollutants, their causes, consequences and options to minimize their appearance. As well as, develop a commercial product for its launch.



### EXPECTED RESULTS

The project will have very positive consequences at an environmental, economic and health level, since it will facilitate the generalization of very versatile and powerful water treatment technologies, which will contribute to solving a serious environmental and health problem derived from the presence of contaminants in our waters with a high impact on human health and ecosystems.

<https://www.lifecleanup.eu/qu-es-life-clean-up>