LIFE SOLIEVA - Circular economy applied to the treatment of table olives brines based on solar evaporation

LIFE17 ENV/ES/000273

Project description Environmental issues Beneficiaries Administrative data
Read more

Contact details:

Contact person: Clarens FREDERIC
Tel: 34938777373
Email: luis.escuder@eurecat.org

Project description:

Background

Brine released from the production of table olives is contaminating soils and water bodies around the Mediterranean. These salty effluents can seep into the ground and spread through rivers, altering local chemical conditions and upsetting ecosystems. The composition and irregular discharge of effluents from the olive industry complicate their treatment. At present, brine is typically accumulated in open ponds where it is left to evaporate. The sludge from evaporation ponds is treated and disposed of in landfills. However, bad practices in the construction and maintenance of these evaporation ponds entail a high risk of pollution due to waste leakage and migration into groundwater and deep soil. Other common brine management techniques include discharging it directly into the sea or injecting it in deep wells, raising in both cases local salt content to levels that cause negative environmental effects.

Objectives

The main goal of LIFE SOLIEVA is to demonstrate the environmental benefits and economic viability of clean technologies to treat brine from processed table olives. These environmentally sustainable approaches will help recover valuable by-products from the effluents, including salt, and organic compounds called polyphenols that can be of further use in the food industry. Cleaning the wastewater will also make it fit again to process olives. Project partners expect to

reduce the overall fresh water demand in this industry by 95%, supporting water conservation objectives set out in the Water Framework Directive. The technologies will also help use resources more efficiently as described in the EU circular economy strategy. These benefits could ultimately be shared by other agricultural sectors facing brine treatment challenges.

Expected results:

- Study the quantity and composition of brine released by the EU agri-food sector;
- Reduce water consumption for processing table olives by 95%;
- Cut CO2 emitted from processing table olives by 60%;
- Assess the performance of OCR-based technology and advanced solar evaporation in treating brine;
- Recover 30% of salts, 40% of NaOH, 50% of polyphenols and 65% of water in olive processing brine for reuse in industry;
- Chart out a business model to introduce SOLIEVA solutions to the olive processing market and provide tools to investigate their further uptake in four other agri-food sectors.

Results

Top

Environmental issues addressed:

Themes

Water - Waste water treatment

Keywords

waste water treatment, food production, alternative technology, resource conservation

Target EU Legislation

- Waste
- COM(2015)614 - "Closing the loop - An EU action plan for the Circular Economy" (02.12.2015)
- Water
- Directive 2000/60 - Framework for Community action in the field of water policy (23.10.2000)

Natura 2000 sites

Not applicable

Top

Beneficiaries:

Coordinator	FUNDACI CTM CENTRE TECNOLGIC
Type of organisation	Research institution
Description	Fundació CTM Centre Tecnològic is a research centre based in Barcelona, Spain. It carries out R&D and innovation projects in fields including environmental technology, materials, energy and innovative design.
Partners	Asociación Empresarial de Investigación Centro Tecnológico Nacional de la Conserva, Spain Técnica y Proyectos S.A., Spain NTRA. SRA. DE LAS VIRTUDES S.C.A, Spain Panhellenic Association of Table Olives Processors Packers & Exporters, Greece FUNDACIÓN CITOLIVA - CENTRO DE INNOVACION Y TECNOLOGÁ DEL OLIVAR Y EL ACEITE, Spain

Top

Administrative data:

Project reference	LIFE17 ENV/ES/000273
Duration	01-SEP-2018 to 31-DEC -2021
Total budget	2,018,362.00 €
EU contribution	1,211,015.00 €
Project location	Cataluña(España)

Top

Read more:

Project web site	Project's website
Project web site - 2	Project's Twitter page

Top

Project description Environmental issues Beneficiaries Administrative data
Read more