



With the contribution of the LIFE Programme of the European Union

# **ACTIONS COMPLETED**



### **DESIGN AND CONSTRUCTION OF THE PILOT PLANTS**



The **design** of the pilot plants has been carried out following the recommendations and results obtained in the previous actions regarding the optimization of the operating conditions at lab-scale.

The design of the pilot plant from **Viimsi** is essentially formed by an aeration stage, an oxidation stage and a final filtration stage.

The design of the pilot plants from **Tahal**, **Alboloduy** and **Benizalon** is formed, mainly, by two filtration stages.

Once the design was completed, the pilot plants were built.

# OPTIMIZATION OF OPERATING PARAMETERS WITH THE PILOT PLANT AT LAB-SCALE IN THE DWTPs OF ALMERÍA



Different tests have been carried out with the labscale pilot plant in situ at the **Benizalon** DWTP. This experimentation has been carried out as a preliminary stage to the construction of the pilot plants in Almeria, for the **optimization** of some of the operation parameters and to evaluate the efficiency of the filtering materials.

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## **ACTIONS COMPLETED**



## THE PILOT PLANT FROM VIIMSI (ESTONIA) IS ALREADY RUNNING



The pilot plant is already **installed** and **running** at the **Viimsi** DWTP (Estonia). The design of this plant has been focused on **removing Ra-226**, **Ra-228**, besides other water pollutants.

Therefore, the **validation** and **operation** tasks of the pilot plant have started. The monitoring of the parameters to be evaluated (radio isotopes and chemical parameters such as iron and manganese), has been begun according to the established sampling plan.

# DATABASE OF EUROPEAN DWTPs TREATING WATER WITH NATURAL RADIOACTIVITY

Data from new countries are being incorporated and the databases that are already available are being updated.

To access the database, it is necessary to **request access** to LIFE ALCHEMIA team through a short form available on the project website.

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#### **ENVIRONMENTAL INDICATORS**

The **life cycle inventory** is being carried out, selecting the necessary parameters to carry out the Life Cycle Analysis (LCA), collecting data and defining the functional unit for the initial scenario (technology already implemented) and for the pilot scenario (with Alchemia technology implemented).





### LIFE ALCHEMIA IN THE EUROPEAN NIGHT OF RESEARCHERS

LIFE ALCHEMIA project was present and actively participated in the European Night of Researchers held in Almeria (Spain).

The LIFE ALCHEMIA **stand** was attended by our partners from the **Diputación de Almeria** and **CIESOL**, who showed the project to all the people from Almeria who participated in the congress.



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# INFORMATION SESSIONS IN TWO COLLEGES FROM ALMERÍA (SPAIN)



Our partners from **CIESOL** gave **two informative talks** in two colleges of the Almeria province (IES El Parador in Roquetas de Mar and IES Santo Domingo in El Ejido).

In this way, the teenagers from Almeria could learn more about the project objectives and the proposed solutions to remove natural radioactivity.

## **READ MORE**





4<sup>TH</sup> INTERNATIONAL CONGRESS WATER, WASTE AND ENERGY

**MANAGEMENT-EWWM 2018** 

LIFE ALCHEMIA attended and participated in the 4<sup>th</sup> International Congress **EWWM 2018** hold in Madrid.

Our partners from **CARTIF** exposed the technologies used in the project to remove the natural radioactivity from water as well as

the project progresses.

**READ MORE** 



# 1<sup>st</sup> ENA (EUROPEAN NORM ASSOCIATION) INTERNATIONAL WORKSHOP



The 1<sup>st</sup> **ENA** workshop organized in Katowice (Poland) was attended by our partners from **University of Tartu** (Estonia).

LIFE ALCHEMIA project was presented in the "NORM management challenges and approaches" session.

### **READ MORE**





#### LIFE ALCHEMIA ON RADIO

Our partners from **Diputación de Almeria**, Isabel Rodríguez, and José Luis Casas from **CIESOL**, were interviewed by Onda Cero radio in the "**Almeria en la onda**" program, in the frame of the European Night of Researchers





### LIFE ALCHEMIA PUBLICATION ON OPEN ACCESS GOVERNMENT

LIFE ALCHEMIA has published an article in the October issue of the Open Access Government digital journal. Our partner from Tallin University of Technology, Anna Goi, has realized a communication in which the origin of the presence of natural radionuclides in drinking water, among others, is explained.

**READ MORE** 

## FIRST PROMOTIONAL VIDEO OF LIFE ALCHEMIA

The first promotional video of the project is already available in our Youtube channel. It shows a general visión of the project.

**WATCH VIDEO** 





#### **NETWORKING**

Lines of action complementary to the theme "water" through LIFE projects are continuously being sought. Among the latest projects with which Life Alchemia has contacted and exchanged information are: LIFE LIBERNITRATE, LIFE ECOGRANULAR WATER or LIFE MCUBO. A news item will be published on the project website with more information about it.

### LIFE ALCHEMIA IN PRESS MEDIA

Diario de Almería 🤞

Many communication media have informed about the last advances and actions carried out by the project's partnership. **Some of the news** that have appeared not only in general press but also in press specialized in the water field are shown below:

PRO



Luz verde a las potabilizadoras de Albolc



# **NEXT ACTIONS**



- ⇒ **CONSTRUCTION and START-UP** of the pilot plants in Tahal, Alboloduy and Benizalón (Almería).
- ⇒ **UPDATE** and expansion of the Spanish and European **DATABASES** of DWTPs that treat water with natural radioactivity.
- ⇒ Continue with the actions of **NETWORKING** with other projects from the LIFE Programmes (essentially) and H2020.

#### **⇒ EVENTS**:

NEEMO monitoring meeting.

Seventh international Conference on radiation in various fields of research

10<sup>th</sup>-14<sup>th</sup> June 2019, Herceg Novi (Montenegro) (http://www.rad2019.rad-conference.org/welcome.php)

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