



Two-stage autotrophic N-removal for mainstream sewage treatment

## NEWSLETTER

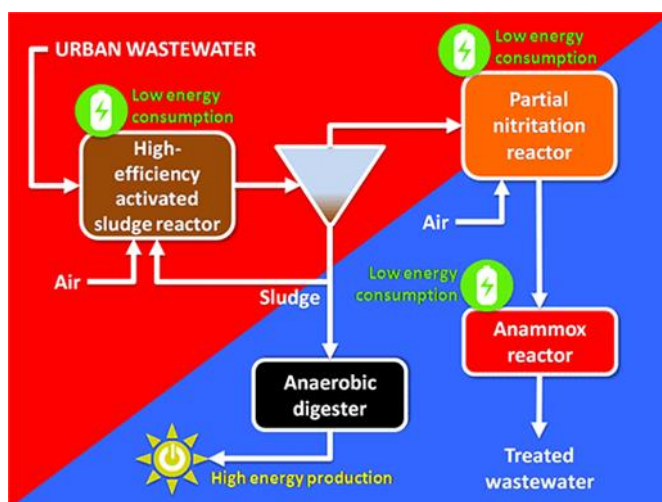
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Welcome to the second edition of the SAVING-E e-newsletter! The project kicked off its activities in October 2015 and we are looking forward to sharing with you our progress over the next years. Our newsletter will be published every 3 months and each issue will bring you information on the progress and the updates of our project.

Happy reading,  
SAVING-E team

### — LATEST NEWS & EVENTS —



What is about?



The project LIFE14 ENV/ES/000633 - LIFE SAVING-E Two-Stage Autotrophic N-removal for mainstream sewage treatment, funded by the EU LIFE programme, is a pilot project dealing with

the transformation of the current wastewater treatment plants from being energy-consumers to be energy-sufficient or even energy-producer facilities. With a total budget of €€1.169.068, SAVING-E has a duration of 3.5 years (01/10/2015 - 31/03/2019).

The main objective of SAVING-E project is to evaluate whether is possible or not the conversion of current urban WWTPs from being net-energy consumers into self-sufficient or even net-energy producers, by using all the organic matter for biogas production thanks to the implementation of a two-stage autotrophic BNR (nitrification + Anammox) in the mainstream. This new process has not been applied or tested before neither at pilot scale nor at full scale.

SAVING-E will demonstrate the feasibility, applicability, replicability and transferability of the SAVING-E technology. This process will truly offer environmental, economic and social advantages compared to the current technologies applied in urban WWTPs.

The consortium of the project is formed by 4 partners which empower the initiative with relevant experience as well as their broad networking influence and reach: Universitat Autònoma de Barcelona (UAB) as coordinator and, Depuración de Aguas del Mediterráneo (DAM), Agència Catalana de l'Aigua (ACA) and The European Technology for Water (WssTP) as partners.

## LIFE+ SAVING-E Media Coverage

The latest appearances of the LIFE + SAVING-E project in the media are detailed below.

At the beginning of this year, a review on the LIFE + SAVING-E project, prepared by Eduardo Morales (Depuración de Aguas del Mediterráneo), member of the project consortium, was published in [aguasresiduales.info](http://aguasresiduales.info) and [tecnoaqua.es](http://tecnoaqua.es), both digital portals related with the water field. The articles published have been "DAM advances in the European project that allows the WWTP to self-supply energy"

<http://www.aguasresiduales.info/revista/noticias/dam-avanza-en-el-proyecto-europeo-que-permite-autoabastecer-energeticamente-las-depur-1xAEd>

<http://www.tecnoaqua.es/noticias/20161230/dam-avanza-proyecto-saving-autoabastecer-energia-depuradoras#.WGZAYVXhBhE>

On the TV program "A punto con la 2" a short review was given about LIFE+ SAVING-E project by Manuel Matellan, president of the Spanish inventors club.

<http://www.rtve.es/alacarta/videos/a-punto-con-la-2/punto-2-26-07-16/3673218/>.

On 25th February, the program "Càpsules de Ciència" was broadcast, a space that includes a series of articles dedicated to biomedicine and biotechnology, carried out by Catalan scientists. The series "Càpsules de ciència", is broadcast on channel 33 and allows knowing the work of the Catalan scientific elite and its links with the city in which it lives. In this edition, the project "LIFE + SAVING-E" was presented by Julián Carrera, project coordinator and professor of the Departament d'Enginyeria Química, Biològica i Ambiental (UAB).

<http://www.ccma.cat/tv3/alacarta/capsules-de-ciencia/el-futur-de-la-depuracio-de-les-aigues-residuals-urbanes/video/5650818/>

On the other hand, from the Departament d'Afers i relacions Institucionals i Exteriors i Transparència de la Generalitat de Catalunya, the European research projects are being made visible through its website. The LIFE + SAVING-E project has joined this proposal since last January.

[http://afersexteriors.gencat.cat/ca/detalls/noticia/20170123\\_SAVING-E-E-00001](http://afersexteriors.gencat.cat/ca/detalls/noticia/20170123_SAVING-E-E-00001)

## Francesc Gambús, Member of the European Parliament, visited LIFE SAVING-E Project.

On 13 January, Francesc Gambús, member of the European Parliament and a member of the Environment Committee, visited Parc de Recerca UAB, motivated by the project LIFE SAVING-E. During their visit he could learn about two LIFE projects, which are currently under development, in UAB. Juan Fran Sangüesa, responsible for the Projects Area of the Parc de Recerca UAB, explained reWINE project, which studies the feasibility of a sustainable system for collecting, cleaning and reusing glass bottles in the wine sector in Catalonia. On the other hand, Julián Carrera, researcher of the research group GENOCOV of the Departament d'Enginyeria Biològica, Química i Ambiental of UAB, has presented SAVING-E project, which aims to evaluate whether is possible or not the conversion of current urban WWTPs from being net-energy consumers into self-sufficient or even net-energy producers.

Finally, they visited the facilities where the Pilot Plant is located and where the pilot test of the technology proposed by the LIFE SAVING-E project is being developed.



Mr. Gambús and Julián Carrera during the visit to the SAVING-E Pilot Plant



## SAVING-E Consortium disseminates the LIFE+ SAVING-E project

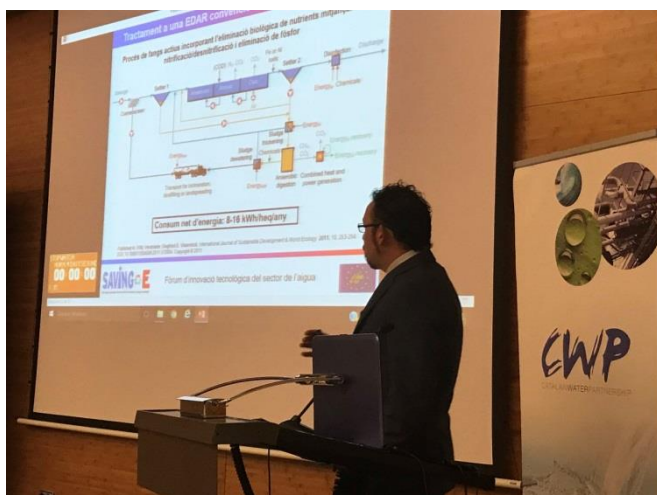
LIFE+ SAVING-E Consortium participates in different dissemination events. In the following lines are detailed the most relevant.

At the end of 2016, LIFE+ SAVING-E team will participated in Iwater which was in Barcelona from 15th to 17th of November 2016. Iwater is intended as an international meeting point for all the stakeholders who will define the evolution of the water sector, offering innovative high-tech solutions that effectively address challenges such as the efficient management of resources and infrastructures, the increase in water demand in a context of hydric stress, and new models of public-private collaboration. An oral contribution entitled “Transforming current wastewater treatment plants from energy consumers to energy-sufficient or energy producer facilities by implementing a two-stage autotrophic biological nitrogen removal (nitrification + anammox) in the mainstream: The LIFE14 ENV/ES/000633 - LIFE SAVING-E” was presented by Maria Eugenia Suárez-Ojeda, UAB-team, for Inno Hub.



Maria Eugenia Suárez-Ojeda (UAB) in IWater 2016

LIFE+ SAVING-E team has participated in Water Sector Innovation Technology Forum organized by the Catalan Water Partnership (CWP) which took place in LEITAT facilities (Terrassa) last 27th of April 2017. The aim of this forum was to promote knowledge transfer and networking regarding to the most relevant technological innovations and R&D for a sustainable use of water in Catalonia. An oral contribution entitled “Implementation autotrophic biological nitrogen removal (nitrification + anammox) in the mainstream: LIFE14 ENV/ES/000633 - LIFE SAVING-E” has been presented by Julián Carrera, coordinator of LIFE SAVING-E project.



Julián Carrera (UAB) in Water Sector Innovation Technology Forum organized by the Catalan Water Partnership (CWP)

LIFE+ SAVING-E project participated at the XXXIV AEAS Technical Conference to be held in Tarragona on 24, 25 and 26 May 2017. In this event Depuración de Aguas del Mediterráneo, as a member of the SAVING-E team, disseminated the last advances on the project. During this conference an explanatory video of the project was projected in order to show all the information and the latest advances made to date.

<https://youtu.be/TQmE6ticPlo>



Javier Claros from DAM during XXXIV AEAS Technical Conference



## Second monitoring meeting of SAVING-E



Second monitoring meeting with the SAVING-E team and Neemo team

On 6th April took place the Second Monitoring Visit of LIFE+ SAVING-E Project at Escola d'Enginyeria (Universitat Autònoma de Barcelona) premises. The meeting was attended by Mariona Salvatella, Project Officer from European Commission (NEEMO), and all the project's partners (UAB, DAM, ACA and WssTP).

On this day, a brief summary of the project's status was presented by the project's coordinator Julián Carrera (UAB), including implementation, dissemination and management actions, as well as, new project challenges.

Finally, they visited the facilities where the Pilot Plant is located and where the pilot tests of the technology proposed by the LIFE SAVING-E project is being developed.

### SAVING-E Pilot Plant received Scholar visits

On February 3th, elementary students of Escola Emili Juncadella (Barcelona) visited the facilities of the Urban Wastewater Treatment Plant of Rubí where the Project's Pilot Plant is located. During their visit, guided by the coordinator of the project Julián Carrera (UAB), they were able to know the operation of a conventional Urban Wastewater Treatment Plant and the SAVING-E technology and to learn the benefits of it.



LIFE+ SAVING-E Project participated in the First Cultural Technical Week held at Institut Públic La Romànica of Barbera del Vallès (3-6 April). On April 4, Maria Eugenia Suárez Ojeda (UAB) gave a talk entitled "What are the options for the transformation of the current WWTPs into resource recovery hubs?" where she explained LIFE+ SAVING-E project to vocational students. Later, Carlos Ramos (UAB) received them in the facilities of the Project's Pilot Plant for a guided tour.





On July 4th, high-school students from INS Ramon Turró i Darder (Malgrat de Mar), Col·legi Maristes Champagnat (Badalona) and Escola Pia Sant Antoni (Barcelona) participating in the Argó programme visited the facilities of the Urban Wastewater Treatment Plant of Rubí where the Project's Pilot Plant is located. During their visit, guided by María Eugenia Suárez-Ojeda (UAB), they were able to know the operation of a conventional Urban Wastewater Treatment Plant and the SAVING-E technology and to learn the benefits of it. The aim of this visit was to use the information in their research projects.





## Winter School of SAVING-E

Next 24-25<sup>th</sup> of January 2018 will take place the Winter School of SAVING-E entitled “Self-sufficient urban WWTP: Implementation of the autotrophic nitrogen removal in the main water-line. The course will be at Escola d’Enginyeria of Universitat Autònoma de Barcelona and will be free. This 2-day course will include lectures given by the project-leaders, discussion sessions and practical activities focused on the LIFE+ SAVING-E technology. During the course will be visited the facilities of the Urban Wastewater Treatment Plant of Rubí where the SAVING-E Pilot Plant is located. This intensive course is mainly oriented towards professionals and students which are interested in expand their knowledge in this field. The course will be taught in Spanish.



With the contribution of the LIFE programme of the European Union