

WATER QUALITY MONITORING: A VIEW OF A FINAL USER IN THE FRAMEWORK OF WATER REUSE

*EPIC Online Technology Meeting on Water Quality
Monitoring and Purification (in cooperation with IUVA)*

November 9th 2020

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Our company



- Water branch of URBASER: world leader in environmental management.

- SOCAMEX with more than 30 years in the water market contributes to sustainable development and improved water quality



Challenges facing the water sector

1. Improve the safety and health of people

23/10/2020

The new Drinking Water Directive: Approved by the EU Council. Transposition into national law by **2023**



2. Boosting the circular economy

25/05/2020

REGULATION (EU) 2020/741 on minimum requirements for water reuse will apply from 26 June **2023**



1. Improve the safety and health of people

The new Drinking Water Directive: 23 of October of 2020 Approved by the EU Council

Cost-effective risk-based approach

Addresses growing concern about the effects of new parameters. Endocrine disruptors, pharmaceuticals and microplastics on human health by introducing a watch list mechanism

The new Drinking Water Directive

This parametric value shall only apply once technical guidelines for monitoring this parameter are developed

Parameter	Parametric Value (µg/L)	Complexity of the Analytical Method	Impact
PFAS Total	0,5 µg/L ()	High	High in Laboratories Variable management, which can be high in areas with industrial pollution.
Sum of PFAS	0,2 µg/L (suma)	High	High in Laboratories Variable management, which can be high in areas with industrial pollution.
Haloacetic acids (HAAs)	80 µg/L (suma)	Medium	Medio en laboratorios Bajo en explotación
Endocrine disruptors	Beta-estradiol: watch list Bisphenol A: 2,5 µg/L Nonilphenol: watch list	High	High in Laboratories Variable management, which can be high with Bisphenol
Uranium	30 µg/L	Medium	Low
Chlorite y Chlorate	250 µg/L	Medium	High in management when ClO ₂ is use as a disinfectant. In tihs case the parametric value is 700 µg/L
Somatic coliphages	50/100mL (only monitoring in raw water)	Medium	Low
Microcystin-LR	1,0 µg/L	Low	No changes
Turbidity	0,3 NTU (only monitoring not parametric)	High	High in management 0,3 NTU in 95 % of samples and none to exceed 1 NTU. Need to be continuous analysis in big Utilities > 10 000 m ³ /d

2. Boosting the circular economy

25/05/2020

REGULATION (EU) 2020/741 on minimum requirements for
water reuse will apply from 26 June 2023 **Risk management**



PROJECT Ô: Demonstration of planning and technology tools for a circular, integrated and symbiotic use of water



REUSE WATER

STARTING POINT:
CENTRALIZED WATER
MANAGEMENT

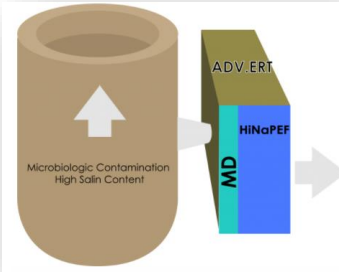
TOOLS:
TECHNOLOGIES
& APPROACHES

OBJECTIVE: SMALL LOOPS
OF WATER MANAGEMENT

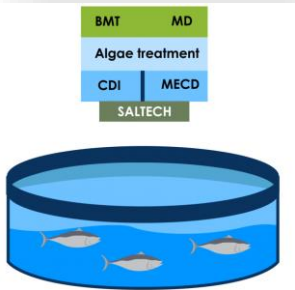
GENERAL OBJECTIVE

ACHIEVE a multi-user, collaborative platform
USE alternative water sources (brackish, rain, wastewaters)
INTEGRATE community in decision-making processes

4 PILOT PLANTS



ADV.ERT (Italy)
Treats water from wells (affected with microbial contamination and salinity) to get drinkable water.



SALTECH (Israel)
Recovers nutrients and biomass for animal feeding. Resolves water high nutrient, salinity and microbial content.



MOBILE3TECH (Spain)
Treats industrial spills and implements tertiary treatment for emerging pollutants. Enables safe reuse of water from WWTPs.

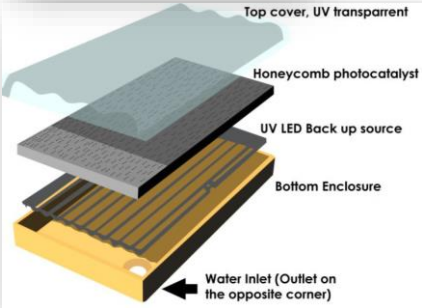
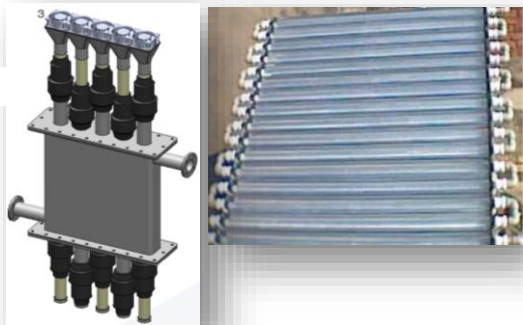


PHOTO.CAT (Croatia)
Treats difficult water pollutants from the industry processes for reuse in the same industry.

3 of the pilots incorporate photonics-based technologies



PHOTOCATALYSIS
Croatia demosite



UV PHOTO-FENTON
Spain demosite



HV NANOSECOND PULSED ELECTRIC FIELD (HVNSPEF)
Italy + Croatia demosites

NECESSITY TO MONITOR AND GUARANTEE SAFETY FOR REUSE!



Thank you!

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Project Ô: <http://eu-project-o.eu/>