

FINAL EVENT “Reuse of treated wastewater... the solution to address water resources scarcity”

The final event for the closure of the project took place on 16th September 2020 at the Hotel Byzantino in Patras. The event was organized by Municipality of Patras and Municipal Enterprise of water Supply and Sewerage of Patras. Konstadinos Konstadakopoulos, Re-Water Project Manager from the Dpt. of Environment & Energy of Municipality of Patras gave a speech concerning the contribution of treated wastewater reuse in climate change tackling. Professor Danilo Spasiano from Polytechnic University of Bari talked about the adoption of new technologies for the reuse of wastewater. Professor Christakis Paraskeva from the Department of Chemical Engineering of University of Patras presented the Installation and operation of the pilot ultrafiltration unit at DEYAP sewage treatment plant, the characteristics of the treated water and proposed several actions for the utilization of the produced water. Eng. Fabrizio Dell'Anna from Acquedotto Pugliese SpA presented the AQP and sustainable water management: technological innovation and reuse of wastewater in Gallipoli. Dr. Eleni Sazakli from the Laboratory of Public Health Medical School of University of Patras gave a lecture concerning the wastewater recycling and presented cases of application studies in Greece.

Vasileios Kantzaris, Head of Dpt. Studies of Green works of Mun. of Patras -Directorate of Environment, Energy & Green Spaces talked about the reuse of treated wastewater and circular economy. Eng. Gianluca Perrone from Municipality of Gallipoli presented the Re-water project and the demonstration action in Gallipoli and finally Dr. Petros Kokkinos who is collaborating teaching staff of the Hellenic Open University (HOU) gave a speech concerning the Safe reuse of wastewater and biosolids.



Biological Characteristics of the treated water using the Membranes Pilot Plant & Possible uses

	Feed	Concentrate	Permeate	Feed	Concentrate	Permeate	Limits
BOD	1	15	2	0	0	0	
COD (mg/L O₂)	50- 64	57- 92	17-34	<15	18	<15	125
E.Coli (CFU/100ml)	20000-36000	40000-113000	0	0	0	0	
Other coliforms, (CFU/100 ml)	47500-110000	2.830.000	3380-5100			0	
Total coliforms (CFU/100 ml)	83500-130000	2.870.000	3300-5100	6	38	0	500 after chlorination
Enterococcus (CFU/100 ml)	16.000	16.000	0	0	0	0	

The Membrane pilot plant removal efficiency is greater than 95% for total coliforms and other coliforms.

The treated water in UF pilot plant can be used for:

- ✓ Irrigation of the park close to Sewage Treated Plant (10-12 acres >40000 m²)
- ✓ Tree's irrigation (which are planted on the road pavements)
- ✓ Industrial use
- ✓ Street washing, washing of bins, washing of public market areas, supply of fire tanks, water tanks