



Water Is Necessary For Life – WIN4Life Conference 19–21 September 2013, Tinos Island, Greece

Editorial

The sustainable management of water resources is of the essence particularly for countries facing significant water scarcity problems. According to the Water Framework Directive of the European Union (Council Directive 2000/60/EC), “Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such”. Therefore, water is an important thematic element of the EC policy. Considerable resources have been invested since 2006 on more than 450 projects related to water research supported by the main EC programmes, namely INTERREG, FP7, CIP and LIFE. Indicatively, among the 3,708 projects co-financed by the LIFE programme since 1992, more than 900 (>20%) deal with water.

Recognizing that industry, research and policy should develop creative collaborations, the **Water Is Necessary For Life —WIN4 Life** Conference was addressed to industries, researchers, engineers, policy-makers, academics, water authorities and other organizations involved in the field of water resources. The conference took place at the Cultural Foundation of Tinos Island, in Greece from 19th to 21st September 2013 and was organized in the framework of the SOL-BRINE project (<http://uest.ntua.gr/solbrine>). SOL-BRINE is an Environmental Policy and Governance Project co-funded by the LIFE + Programme, the EU financial instrument for the Environment. The duration of the project was 39 months (start date: 1 October 2010—end date: 31 December 2013). The project was implemented in the island of Tinos, Greece under the coordination of the Municipality of Tinos and the cooperation of the associated beneficiaries National Technical University of Athens that had the responsibility for the technical part of the project and Culligan Hellas SA. Within the framework of the project, an innovative and energy autonomous brine treatment system was developed. This prototype was designed to achieve total elimination of the brine generated by the seawater desalination plant of Tinos, according to the zero liquid discharge (ZLD) principle. The project results are very encouraging, resulting in high water recovery (>90%) and production of dry salt with market prospects.

Our goal in this special issue in the *Desalination and Water Treatment* journal is to present the best full papers that were presented in the WIN4Life conference, addressing a variety of topics on water resources with emphasis on advanced desalination techniques and desalination powered by renewable energy sources, solar desalination applications, ZLD applications, brine management, water resources challenges and management, integration of reclaimed water reuse in the overall water resources management and advanced wastewater treatment processes.



The innovative SOL-BRINE system for the management of brine in Tinos Island, Greece and a relevant notice board.

Several islands in the Mediterranean face significant water shortage problems. As a response to this, several seawater desalination plants have been developed and are currently operating, discharging the brine into the Mediterranean Sea. The implementation of the SOL-BRINE system can eliminate the problem of brine management within desalination plants. Therefore, our next goal is to move from the pilot scale application of the SOL-BRINE system to full scale and thus, provide a complete solution to brine management.

We would like to thank Dr Miriam Balaban, the Editor-in-Chief of *Desalination and Water Treatment*, as well the LIFE + Programme of the European Commission for the financial support of the SOL-BRINE project.

Guest Editors

Dr. Konstantinos Moustakas

Dr. Simos Malamis

National Technical University of Athens

School of Chemical Engineering

Unit of Environmental Science & Technology

9 Heron Polytechniou Street, Zographou Campus

15773 Athens, Greece

Email: konmoust@central.ntua.gr

Tel. +30 210 7723108/3106/2334; Fax: +30 210 7723285

Website: www.uest.gr