

International Conference on Efficient & Sustainable Water Systems Management toward Worth Living Development, 2nd EWaS 2016

Preface / Guest Editorial



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Peer-review under responsibility of the organizing committee of the EWaS2 International Conference on Efficient & Sustainable Water Systems Management toward Worth Living Development

Water scarcity and climate change are considered as the main causes of water related problems around the Globe. These problems get even worse due to the anthropogenic stresses put at the water systems struggling to meet the rapidly growing water demands. At the same time the Humanity pursues higher living standards for all, compared to those inherited by the ancestors. Although the well-known environmental management approach “Sustainable Development” stating that “...the opportunity cost (cost of equal chances) between generations should remain intact...”, guarantees that things will not get worse as time passes by, it by no means safeguards that the embedded conditions will assist things get better either. Based on the historical path of Humanity it is more than certain that next generations will probably be forced to face worst conditions related to the satisfaction of their basic needs, compared to their ancestors. Thus the basic concept of the “Sustainable Development” may prove to be not enough for them to live a worth-living life. This is why an evolution of the “Sustainable Development” approach is growing fast to become the new prevailing concept. The Worth-Living Development states that “...the opportunity cost between generations should be gradually decreased to take under consideration the additional threats future generations will probably have to face...”. Thus each generation will hand over to the next one a better place to live in. This is actually what usually parents do for their kids.

It is estimated that 20-40% of Europe’s available water is being wasted from leakages in the supply systems. This results to inefficient use of water and energy resources as well as negative economic, technical, social and environmental impacts. Efficient and sustainable management of water distribution systems asks for advanced tools and strategies for the analysis, monitoring, planning and operation of water distribution networks (WDNs). In such context, the integration with ICT innovations in the water sector offers new opportunities for the WDN management in urban areas, while exploiting the smart water networks paradigm.

In this context, the 2nd EWaS International Conference “Efficient & Sustainable Water Systems toward Worth Living Development”, attempts to highlight the need to improve the efficiency and sustainability of all water system in a changing and fragile environment, especially under the frustrating economic conditions we all are facing today. EWaS series of conferences started in 2013, when the 1st EWaS Conference was held in Thessaloniki. The 2nd EWaS Conference (EWaS2) held in Platania/Chania, Crete, was co-organized by the University of Thessaly/Civil

Engineering Department and the Technical University of Crete/School of Environmental Engineering, (Co-chairmen: V. Kanakoudis-University of Thessaly, G. Karatzas-Technical University of Crete, vice chairman: E. Keramaris-University of Thessaly). The next one will be organized in 2018.

This Procedia Engineering issue contains 77 papers selected from those presented at the EWaS2 conference. These papers cover a wide range of scientific themes: a) Hydraulics; b) Urban Water Management; c) Riverine Systems; d) Global Changes and Smart Cities; e) Hydrology; f) Raw & Waste Water Treatment – Waste Management; g) Groundwater and Irrigation Systems; h) Advanced Methods for Environmental System Analysis; and the Special Session entitled “Advanced and sustainable management of water distribution systems: leakages and energy”, chaired by Prof. Marco Franchini (Università degli Studi di Ferrara - Italy) and Dr. Silvia Meniconi (Università degli Studi di Perugia - Italy)

The Guest Editors would like to thank:

- the authors of the papers, for their scientific contributions;
- the article reviewers for the time and efforts they sacrificed in order to ensure high standards for the submitted manuscripts;
- the members of the Organizing and Scientific Committees;
- the sponsors of the EWaS2 Conference for their great financial support;
- all participants for their involvement in the knowledge-exchange process which is after-all the essence of the conference.

The Guest Editors are also grateful to Elsevier Procedia Engineering and its team for their work in the publication of this proceedings.

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