Editorial

Nilgun Harmancioglu^{1,2} · George Tsakiris²

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This special issue of *Environmental Processes* includes the keynote presentations of the 9th World Congress of the European Water Resources Association (EWRA). The Congress was held in Istanbul, 10–13 June 2015, with the general title «*Water Resources Management in a Changing world: Challenges and Opportunities*».

The Congress comprised the following six specialised conferences:

- I. Hydrological Processes and Evolving Hazards
- II. Geo-information and Water Resources
- III. Technological Advances in Water Distribution, Purification and Desalination
- IV. Water Pollution and Eco-systems Conservancy
- V. Multicriteria Sustainability of Water Systems
- VI. Social, Political, Institutional and Legislative Aspects

These six conferences cover a wide range of cutting edge topics on water resources and environment. Engineers and scientists from 49 countries around the globe presented contributions in oral and poster form. 190 high quality papers were presented in total, which have significantly contributed to the multidisciplinary and global context of the Congress, and thereby, the multidisciplinary and global nature of water problems. In the discussions which took place, participants from various disciplines and countries interacted, leading to significant results regarding the formulation of future approaches and procedures in the areas of water resources engineering and management.

✉ George Tsakiris
gtsakir@central.ntua.gr
Nilgun Harmancioglu
nilgun.harmancioglu@deu.edu.tr

¹ Water Resources Management Research and Applications Center (SUMER), Dokuz Eylul University, Izmir, Turkey

² Centre for the Assessment of Natural Hazards & Proactive Planning, and Laboratory of Reclamation Works & Water Resources Management, Athens, Greece

Apart from the introductory presentations, seven keynote speeches were delivered during the sessions of the Congress and the General Assembly of EWRA. The keynote speakers were:

- Professor Bayazit M., Technical University of Istanbul
- Dr. Fedra K., Environmental Software & Services GmbH
- Professor Loucks D.P., Cornell University
- Professor Öziş Ü., Dokuz Eylul University
- Professor Simonovic S., University of Western Ontario
- Professor Singh V., Texas A&M University
- Professor Tsakiris G., National Technical University of Athens

The papers included in this issue reflect the content of the keynote presentations. However, they have been extended and revised having passed through the reviewing process of the journal. In short the topics dealt in these papers are briefly presented below.

Bayazit (2015) reviews issues of stationarity and nonstationarity of hydrological data, particularly related to climate change and anthropogenic interventions.

Singh and Cui (2015) deal with streamflow forecasting, not by using the classic time series analysis but by determining streamflow spectra using the entropy theory. They review various methods of spectral analysis using the entropy theory and test them using available streamflow data.

Fedra (2015) presents a multi-attribute optimization approach to maximize the net benefit from the operation and use of water resources systems. The optimization tries to find the set of policies, measures and technologies with their costs and efficiencies, that will lead as close to maximization as possible.

Nikolic and Simonovic (2015) examine the existing decision making support tools in integrated water resources management practice, and suggest a multi-method modelling framework to examine the codependence between the water resources system and the socio-economic environment.

Walker et al. (2015) review ways for achieving society's objectives over time. They offer analytic approaches to policy makers such as 1) agent-based models, 2) stakeholder involvement and 3) dynamic adaptive policies. All these are supported through case presentations.

Öziş (2015) presents existing water works in Turkey from ancient times till more recent, some of them still in operation.

Finally, Tsakiris (2015) presents the recent European developments in water resources management. He particularly focuses on the EU policies (involving the Framework Directive and its daughter Directives) and their implementation by the member states at the end of the first round of implementation ending in 2015.

Apart from this special issue, there will be several special issues of the journals of EWRA (*Water Resources Management*, *Environmental Processes*, *European Water*, and *Water Utility Journal*) in which a large number of the papers of the Congress will be presented.

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