Editorial

Professor Simon Tait

Professor of Water Engineering, Pennine Water Group, Department of Civil and Structural Engineering, University of Sheffield, Sheffield, UK

A new year offers all of us the opportunity to reflect on how we carry out particular activities and to instigate change if required. Following my appointment as the new Chair of the Editorial Panel, I have been thinking about the role of *Water Management* and how it can serve its readership. As we move into 2014, it is an opportune moment to think about the role that journals play in the life of professional engineers. In today's competitive and increasingly interlinked world, the dissemination of new knowledge will become increasingly important. A question that is often asked is whether peer-reviewed journals have a role today, given the wide range of new sources of information now available to working engineers. The key advantage of journals such as *Water Management* is the peer-review process that aims to provide its readers with a reliable and up-to-date source of information. I therefore believe that it is important that journals such as *Water Management* continue to serve readers with new knowledge on theory, techniques and applications that is relevant to their professional careers.

2014 was a very good year for *Water Management*; its impact factor increased significantly and more authors sent manuscripts to be considered for publication. Both these signs indicated that the readership is engaging more with the journal, and this enhanced level of engagement is due to the significant efforts of the retiring Panel Chair, Professor Nigel Wright, and the members of the Editorial Panel who have worked very hard to improve the standard of published papers whilst maintaining the level of service to our contributors. It is my intention to strive to continue this improvement as we move into 2015. Over the next year we will aim to expand the Editorial Panel to better reflect the more international nature of engineers involved in water management, and also to strengthen our expertise base to address the higher numbers of manuscripts that the journal is receiving. We will also continue with a number of themed issues to bring high quality papers in subject areas of current interest to our readers. As a panel, we also welcome feedback from the readers we serve and will actively consider any suggestions that may improve the service we can provide.

The first 2015 edition of the journal covers a range of issues and contains a variety of papers that reflect the diversity of *Water Management's* readership. It contains papers that report on high-level research studies through to papers that examine the impact of environmental regulation and quantify environmental processes.

The importance of developing and validating new computational techniques for the management of rivers with potentially mobile sediment deposits is exemplified in the paper by Peng *et al.* (2015). These researchers have examined the viability of using Lattice

Boltzmann-based models to simulate sediment deposit evolution. Their paper explains the proposed computational scheme, its practical advantages and its simulated performance against a number of experimental and analytical case studies. A reasonable correspondence between the predicted and observed sediment level positions indicates that this rapid computational technique has promise in terms of its development and use in alluvial rivers.

The focus on research investigation and the dissemination of new knowledge is continued in the paper by Montakhab *et al.* (2015). This paper reports on a complex experimental study investigating the influence of patches of emergent vegetation on hydraulic characteristics such as hydraulic roughness, turbulence intensity and shear stress levels. Their experimental data quantifies the downstream effects of the distribution and stem scale density of vegetation patches on the turbulent flow field and characteristics such as Reynolds stress. These data will no doubt inform future research studies and those engineers working in vegetated channels.

The other three papers in this issue focus more on knowledge obtained from the examination of existing water management systems, and how by disseminating knowledge others can improve their practice.

The paper by McAllister *et al.* (2015) reports on the ability of currently in-service domestic wastewater treatment facilities using recirculating sand filters to remove ammonia from domestic wastewater. The study was driven by the need to remove ammonia in order to meet new water quality standards in updated environmental protection regulations. The study used clever analysis of existing water quality data, collected as part of the current regulatory compliance system, to demonstrate that the current recirculating sand filter technology is unable to deliver domestic wastewater effluent that can meet the updated water quality standards. The study showed the value of using existing collected data and how it can be used to provide evidence for changing practice when regulations change.

The study by Gotsis *et al.* (2015) provides an optimisation tool that will encourage the re-use of saline drainage water for the irrigation of certain crops and so reduce the pressure on local freshwater sources. This type of study provides evidence of the conditions required for water managers to change their practice. This paper demonstrated that significant reductions in freshwater usage and cost and energy savings in the disposal of saline drainage water could be achieved in the case study area if appropriate cropping patterns were used and water managers were able to introduce new ways of management.

The Bhartiya and Ghare (2015) paper reports on the comparative performance of a number of reference evapotranspiration rate calculation methods applied to different regions of India. The methods used performed differently in the various regions and clearly indicated that water resource planners would need to use this study to ensure that they are using the most appropriate method for the estimation of reference evapotranspiration rates when working in India.

This edition reflects the key strengths of *Water Management* with a balance of research-based studies containing new numerical and analysis techniques, or new measurements aimed at understanding complex environmental systems, and also studies that provide new knowledge that directly helps those currently responsible for managing complex water systems.

REFERENCES

- Bhartiya KM and Ghare AD (2015) Reference evapotranspiration in agro-climatic regions of India. *Proceedings of the Institution of Civil Engineers – Water Management* **168(1)**: 37–44, <http://dx.doi.org/10.1680/wama.13.00124>.
- Gotsis D, Giakoumakis S and Alexakis D (2015) Drainage water use options for a regional irrigation system. *Proceedings of the Institution of Civil Engineers – Water Management* **168(1)**: 29–36, <http://dx.doi.org/10.1680/wama.13.00101>.
- McAllister CD, Youngblood Ortiz A and Southards TJ (2015) Effectiveness of ammonia removal by recirculating sand filters. *Proceedings of the Institution of Civil Engineers – Water Management* **168(1)**: 24–28, <http://dx.doi.org/10.1680/wama.13.00091>.
- Montakhab A, Yusuf B and Folkhard AM (2015) Flow turbulence in vegetation in a channel. *Proceedings of the Institution of Civil Engineers – Water Management* **168(1)**: 16–23, <http://dx.doi.org/10.1680/wama.13.00009>.
- Peng Y, Zhou JG and Zhang JM (2015) Mixed numerical method for bed evolution. *Proceedings of the Institution of Civil Engineers – Water Management* **168(1)**: 3–15, <http://dx.doi.org/10.1680/wama.12.00070>.