



Emma Harris
Chair, Editorial Panel

Editorial

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Over recent years there has been a seismic shift in the attitude towards sustainability, not only from us within the profession but also from the rest of society. Sustainable water management is acknowledged as an essential component of growth, social and economic development, poverty reduction and equality. The continuously increasing demand for water resources globally – not only for water supply and sanitation but also for agriculture, industry and energy – brings with it many challenges, as do those we face in dealing with hazards relating to too much water such as floods, erosion and landslides. Research and innovation are critical for developing appropriate ways of combating these challenges, and this journal has an important role in the disseminating the findings – providing authoritative, stimulating, informative and high quality papers for the benefit of all practitioners and applied researchers. *Water Management* has taken up this task since its formation in 2003 following the split of the *Water and Maritime Engineering* journal into *Water Management* and *Maritime Engineering*. The inaugural editorial panel chair, Professor Roger Falconer, has unrelenting enthusiasm for the journal, and the increase in annual publications from four, to six, and now to ten issues is confirmation of the validity of Roger's ambition, together with those of the many authors, research funders, reviewers, panel members and editorial team that have contributed.

This journal marks the end of my term as editorial panel chair, and there are many positive aspects of the journal to report on. It is very encouraging to note that many of our submissions are from overseas authors, which is consistent with our vision to become the leading international journal for practising engineers working in all fields of water management. The recent themed issue on River modelling and flood mitigation: Malaysian perspectives highlighted the pressing issues faced, including the impacts of the destruction of mangroves on tsunami flood propagation¹ and health hazards related to water quality degradation², a study to inform authorities to target effective regulation. The paper by Wardlaw *et al.*³ offers a method to assist farmers and irrigation planners to make informed decisions out planting and water resources – clearly of huge benefit to global water management. The journal has also covered the persistent issue of managing our assets, the papers by Fenner *et al.*⁴ and Boxhall *et al.*⁵ tackled the management of our ageing water supply and sewerage infrastructure. Research at a range of magnitudes have also been addressed, from the regional scale flood risk assessment⁶

to the detailed representation of hydraulic processes around river bends⁷. For historical reference, the journal has published papers detailing how our ancestors addressed issues pertinent to their era, the paper by Kucukali⁸ reviews how Roman engineers selected their water supplies, which demonstrated engineering expertise in water management and hydraulic engineering. For current reference, the paper by Hunter *et al.*⁹ describes a rigorous comparison of six two-dimensional hydraulic models tested within the urban environment. This provides a useful benchmarking paper for those predicting flooding for the locations where the majority of the at-risk assets are sited.

This edition of the journal features another set of varied and interesting papers. The first paper by McGahey *et al.*¹⁰ introduces the roughness advisor, a database of roughness information for today's practitioners. Secondly, continuing the theme of flow prediction, Lamb *et al.*¹¹ demonstrates how the use of technology from the graphics industry can be used to accelerate a two-dimensional floodplain model, reducing run times from hours to minutes. Still on the topic of modelling, Ghumman *et al.*¹², the effect of grid spacing on low Reynolds number k-ε models are studied. The fourth paper by Varaki *et al.*¹³ details extensive measurements of velocity and sediment around diversions dams to determine the key factors in the behaviour. The dams are common features of irrigation networks but the dynamics of the intakes are poorly understood. The following two papers, Muzzammil and Siddiqui¹⁴, and Azamathulla *et al.*¹⁵ address scour issues by investigating reliability-based assessment of scour and prediction of scour location using data mining and knowledge discovery techniques, respectively. The final paper by Afshar¹⁶ explores the particle swarm optimisation algorithm, introduces two mutations and tests them for reservoir operation.

It now only remains for me to hand the position of panel chair to Dr Roger Bettess, to thank everyone involved with the journal for their support over recent years and to wish Roger, together with the rest of the panel, the best of luck for the future.

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