



Systems Thinking and Urban Water Cycle Management

Guest Editor:

Dr. Peter J Coombes

Urban Water Cycle Solutions,
Carrington, New South Wales,
Australia

peter@uwcs.com.au

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Message from the Guest Editor

Equitable social, economic and environmental management of water resources and ecosystem services is central to planning for a world challenged by population growth and an increasingly variable climate. The evolution of urban areas to accommodate growing populations and in response to economic development results in profound changes to the natural water cycle and creates a modified urban water cycle. These changes to water cycle behaviour are driven from the local scale where water is demanded, sewerage is generated and impervious surfaces increase the rate and volume of stormwater runoff. The increasing area and density of cities drives higher costs for water cycle services, and increasing cumulative risk of water shortages, flooding and degradation of waterways. Although the impacts of local changes are experienced at multiple scales and accumulate across linked systems, approaches to governance, management and solutions for water cycle management are often applied as separate centralised processes.

The development of a robust understanding of the nonlinear interactions of all water streams with our urban settings and ecosystems is vital to realising our visions and plans to build sustainable and resilient cities into the future. These human and linked earth systems generate trade-offs in response to proposed interventions that may only be revealed using systems thinking and models of system dynamics. Systems thinkers such as Forrester and Meadows demonstrated that small changes in a system's components, [...]

For further reading, please follow the link to the Special Issue website at: https://www.mdpi.com/journal/water/special_issues/Systems_Urban_Water_Cycle.





Editor-in-Chief

Prof. Dr. Arjen Y. Hoekstra

Twente Water Centre, University
of Twente, Enschede, The
Netherlands

Message from the Editor-in-Chief

The relevance of water in human development and sustaining life, fuels general and scholarly interest in the world's water resources. A better understanding of all aspects of water and its relation to food supply, energy production, human health, and the functioning of ecosystems is key in managing this precious resource in a sustainable, efficient and equitable manner. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications. We ensure a critical review process and a quick turnaround between submission and final decision.

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Contact us

Water
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
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