

## Accepted Manuscript

Title: Toward Addressing Urban Water Security: Searching for Practicability

Author: Ali Nazemi

PII: S2210-6707(17)31204-0  
DOI: <http://dx.doi.org/10.1016/j.scs.2017.09.010>  
Reference: SCS 764

To appear in:

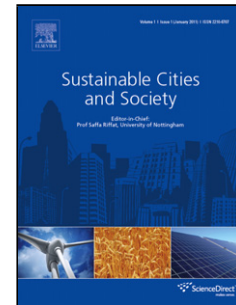
Author: Kaveh Madani

PII: S2210-6707(17)31204-0  
DOI: <http://dx.doi.org/10.1016/j.scs.2017.09.010>  
Reference: SCS 764

To appear in:

Please cite this article as: & Madani, Kaveh., Toward Addressing Urban Water Security: Searching for Practicability. *Sustainable Cities and Society* <http://dx.doi.org/10.1016/j.scs.2017.09.010>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## Toward Addressing Urban Water Security: Searching for Practicability

Ali Nazemi <sup>1\*</sup> and Kaveh Madani <sup>2,3</sup>

<sup>1</sup> Department of Building, Civil and Environmental Engineering, Concordia University, Montreal, Quebec, Canada, Email: ali.nazemi@concordia.ca

<sup>2</sup> Centre for Environmental Policy, Imperial College London, London, UK, Email: k.madani@imperial.ac.uk

<sup>3</sup> Department of Physical Geography, Stockholm University, Stockholm, Sweden

\* Corresponding author

### 1. Introduction

The emergence of global water quality and quantity concerns has necessitated immediate attention to the concept of water security. This has particular importance in urban regions due to direct impacts of water-related threats on human livelihood and economy, making urban water management even politically-sensitive. Despite urgent needs, addressing “urban water security” is not trivial due to extremely complex interactions within and between human and water systems in urban regions. These interactions substantially change in time and space, depending on the details within climate, geography, urban development, demography, socio-economy and governance (see e.g., Franczyk and Chang, 2009; House-Peters and Chang; Breyer et al, 2012; Chang et al., 2014) and can have extend impacts even beyond urban territories (see e.g., Cheung et al., 2003; Van der Perk, 2013; Bain et al., 2014).

Despite being a new concept, scientific contributions around urban water security are rapidly emerging. The SCS’s special issue on *Towards Sustainable Cities and Society: Addressing the Water Security Challenge* aims at providing a forum for studies that shed light on complexities in addressing urban water security, seek innovative tools, methodologies and technologies to overcome urban water security challenges, and promote operational and social practicability in science and management solutions. To the best of our knowledge, this is the first attempt of its kind, dedicated exclusively to water security challenges and solutions in urban settings. The twenty three featured articles in this special issue can be divided into four categories: (1) modeling approaches to urban water security – 7 articles; (2) new insights to urban water security – 5 articles; (3) technological and regulative solutions to urban water security – 4 articles; and (4) social dimension of urban water security – 6 articles. We note that the majority of these contributions are developed around specific case studies; nonetheless, the findings can be relevant to other urban regions – and in some cases to other application domains – as long as general principles are adapted. Below, we briefly introduce contributions featured in this special issue, with a greater goal of portraying the current state-of-the-art, gaps and understandings.

### 2. Modeling approaches to urban water security

Quantitative assessment of urban water security issue often include numerical modeling tools, which are essential for a number of reasons ranging from better understanding of the coupled

Download English Version:

<https://daneshyari.com/en/article/11001307>

Download Persian Version:

<https://daneshyari.com/article/11001307>

[Daneshyari.com](https://daneshyari.com)