



## Nature-Based Solutions to Reduce the Flood Risk in Cities and Peri-Urban Areas

Guest Editors:

**Assoc. Prof. Kuno Kasak**

Department of Geography,  
University of Tartu, Tartu, Estonia

kuno.kasak@ut.ee

**Prof. Ülo Mander**

Department of Geography,  
Institute of Ecology and Earth  
Sciences, University of Tartu,  
Tartu, Estonia

ulo.mander@ut.ee

**Prof. Dr. Miklas Scholz**

Division of Water Resources  
Engineering, Faculty of  
Engineering, Lund University,  
22100 Lund, Sweden

miklas.scholz@tvrl.lth.se

Deadline for manuscript  
submissions:

**31 December 2021**

### Message from the Guest Editors

Dear Colleagues,

This special issue aims to publish high-quality research papers on the interdisciplinary field of nature-based solutions to mitigate flood risk and provide sustainable water treatment solutions in cities and peri-urban areas. Climate change is causing an increased number of climate extreme consequences such as sudden floods and increased droughts. Both of these can result in significant problems in water security, as sudden floods can create significant pollution while droughts will reduce the availability of fresh water.

This special issue seeks contributions spanning a broad range of nature-based solutions for water retention and flood control solutions related to, but not limited to:

- Wetland systems
- Integrated constructed wetlands
- Biofilters for storm water management
- Water absorbing geocomposites
- Green roofs and green walls
- Hybrid solutions and bioreactors
- Microbial electrosynthesis cells and microbial fuel cells
- Bioswales
- Buffer strips and filter strips
- Permeable layers including pavements
- Sustainable flood retention basins
- Bioretention systems



[mdpi.com/si/60737](https://mdpi.com/si/60737)

# Special Issue



*sustain*

Thank you for your contribution.



an Open Access

Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Marc A. Rosen**

Faculty of Engineering and  
Applied Science, University of  
Ontario Institute of Technology,  
Oshawa, ON L1G 0C5, Canada

## Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer-reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

## Author Benefits

**Open Access:**— free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High visibility:** indexed within [Scopus](#), [SCIE](#) and [SSCI \(Web of Science\)](#), [GEOBASE](#), [Inspec](#), [AGRIS](#), [RePEc](#), [CAPus / SciFinder](#), and many [other databases](#).

**Journal Rank:** [JCR](#) - Q2 (*Environmental Sciences*) / [CiteScore](#) - Q1 (*Geography, Planning and Development*)

## Contact Us

*Sustainability*  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
Fax: +41 61 302 89 18  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/sustainability](http://mdpi.com/journal/sustainability)  
[sustainability@mdpi.com](mailto:sustainability@mdpi.com)  
[@Sus\\_MDPI](#)