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The XIV Congress of the International Association for Engineering Geology and the Environment

Session 4-1

Innovative nature-based solution for environmental protection



Conveners



Basanta Raj Adhikari
Institute of Engineering,
Tribhuvan University, Nepal



Gretchen Kalonji
Institute for Disaster Management and
Reconstruction, Sichuan University, China



Di Baofeng
Institute for Disaster Management and
Reconstruction, Sichuan University, China

Brief Introduction of the Session:

Nature-based solutions are actions to protect, sustainably manage or restore natural ecosystems, which address societal challenges such as climate change, human health, food and water security and disaster risk reduction effectively and adaptively to provide benefits for human well-being and biodiversity. The nature-based solutions are considered robust and alternative measures to restore the degraded landscape, slope and bank protection. The nature-based solution is the use of plant or inert plant materials alone (soft-engineering) or in combination with structural measures (hard-engineering) for many reasons such as stabilized slopes, river banks, conservation of soil and water or to restore the degraded ecosystem among others. The composite of nature-based solution and structural measures is often known as green-grey construction. Well-managed ecosystems, such as wetlands, forests and coastal systems, act as natural infrastructures, reducing physical exposure to many hazards and increasing the socio-economic resilience of people and communities by sustaining local livelihoods and providing essential natural resources such as food, water and building materials. It is becoming popular in recent years because it not only provides ecological solutions but also holds co-benefits. The use of traditional and indigenous knowledge for disaster risk reduction using locally available resources is one of the best examples of nature-based solutions. For example, the application of bio-engineering techniques for slope protection and the planting of mangroves reduces the impact of storms on human lives and economic assets and provides a habitat for fish, birds and other plants supporting biodiversity. Moreover, the sponge city concept successfully reduced the pluvial flooding preserving or restoring abundant natural areas such as trees, lakes and parks to absorb the excessive rain. This session will shed light on many recent research activities on applying nature-based solutions for environmental protection. The purpose of this session is to improve and facilitate the application of nature-based solution for geo-hazard mitigation, slope protection, ecological restoration, reduce groundwater contamination, improvement of soil quality and urban flood management. Therefore, this session invites contributions from scientists, engineers, policymakers and practitioners to share their models, experiments or success stories to discuss and improve our knowledge of nature-based solutions.

IMPORTANT DATES



Abstract for Oral Presentation and
Poster Submission Deadline

Jun. 30, 2023



Early Bird Registration Deadline

Aug. 10, 2023



Online Registration Deadline

Sept. 21, 2023

SUBMISSION

For the full-length submission

The submission system is now open for full-length papers. The deadline for submission of full-length paper has been extended to May 31, 2023. Please read the guidelines for paper submittal prior to submitting your full-length paper.

Please read the guidelines prior to submitting your full-length paper or long abstract at <https://www.iaeg2023.org/cfp.html>

For the abstract submission

The abstract submission system for oral presentations and posters is open! If you would rather prepare an abstract for an oral or poster presentation, rather than submitting a full paper, please submit your abstract for consideration by June 30, 2023.

Please read the guidelines prior to submitting your abstract at <https://www.iaeg2023.org/cfa.html>



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Tel: 009779851133510 / +86-028-85996656

E-mail: bradhikari@ioe.edu.np; 1924531493@qq.com