

SEPT. 21-27, 2023
CHENGDU, CHINA

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



Session 2-2

Cryospheric Changes and Sustainable Development

Conveners

Brief Introduction of the Session:

The cryosphere is the part of the Earth system consisting of all snow, ice and frozen ground, both on and beneath the surface of the Earth, and the oceans. The cryosphere is a prominent factor in, and an indicator of, global climate change. It functions as one of the most direct and sensitive feedbacks in the climate system, and plays an important role in the earth's climate system. The global cryosphere has undergone significant changes in recent decades. Almost all of the elements of the cryosphere have lost mass under global warming. As global climate continues to warm in the future, Arctic sea ice extent will continue to shrink, while global glacier volume, Northern Hemisphere spring snow cover, and permafrost extent will continue to decrease. Rapid changes in the cryosphere have profound influences on the energy balance, atmospheric circulation, ocean circulation, water cycle, sea level, carbon cycle, and socio-economic development. The cryosphere plays an important regulatory function to the climate and Earth systems by sophisticated positive and negative feedback processes of water, energy,

and biogeochemical exchange on different spatial and temporal scales. Because the cryosphere stores a significant amount of resources (e.g. water, natural gas, oil) as well as carries endemic biological species and indigenous cultural functions, it is not only an irreplaceable resource but also a candidate for sustainable development of population, resources, environment, social and economic systems at high altitudes and polar regions. The session aims to assess the cryosphere service function (CSF), such as resources, ecosystem services, culture services, tourism values and related factors. The session will focus on our current capabilities to model and assess these changes, mitigation and adaptability strategies in a rapidly changing cryosphere, eco-social sustainability, and the role of the cryosphere in the earth's future. The session is expected to enhance our understanding of changes in all components of the cryosphere and their interdependence and causes.

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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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