

Cambridge University Press

978-1-107-06584-0 - The High-Mountain Cryosphere: Environmental Changes and Human Risks

Edited by Christian Huggel, Mark Carey, John J. Clague and Andreas Kääb

Frontmatter

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THE HIGH-MOUNTAIN CRYOSPHERE

Environmental Changes and Human Risks

The world's high-mountain cryosphere is undergoing unprecedented changes, with significant implications for both humans and the environment. This edited volume, showcasing cutting-edge research, addresses two primary questions: what are the main drivers of change in high mountains and what are the risks implied by these changes?

Applying an interdisciplinary methodology, this comprehensive book provides a definitive overview of the global drivers of high-mountain cryospheric change, from climate, to economy and culture. From a physical perspective, it examines the complex interplay between climate and the high-mountain cryosphere, with further chapters covering tectonics, volcano–ice interactions, hydrology, slope stability, erosion, ecosystems, and glacier- and snow-related hazards. Societal dimensions, both global and local, of high-mountain cryospheric change are also explored. The book offers unique perspectives on high-mountain cultures, livelihoods, governance, and natural resources management, focusing on how global change influences societies and how people respond to climate-induced cryospheric changes.

An invaluable reference for researchers and professionals in cryospheric science, geomorphology, climatology, environmental studies, and human geography, this volume will also be of interest to practitioners working in global change and risk, including NGOs and policy advisors, as well as to graduate students.

CHRISTIAN HUGGEL is a senior researcher at the Department of Geography, University of Zurich. He has worked in mountain regions and the cryosphere worldwide, including the European Alps, the Andes, Mexico, Alaska, the Caucasus, and the Himalayas. Currently, he leads several projects on climate impacts and adaptation in the tropical Andes, in particular Peru, the Indian Himalayas and the Alps, in collaboration with the Swiss and national governments. He is a lead author of the IPCC Working Group II 5th Assessment Report and has been a science advisor and member of the Swiss delegation at the UNFCCC Conference of Parties (COP).

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Environmental Changes and Human Risks

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