

A New Springer-Nature Book Series

Advances in Critical Zone Science

Series Editor: Steven A. Banwart (University of Leeds)

An Invitation for Edited and Authored Volumes

The series editor invites proposals for edited or authored volumes for the series. All areas of Critical Zone science are welcome, particularly those drawing on recent outcomes of funded national CZO programmes.

Air

Biota

Soil

Vater

Submit volume proposals to: CZAdvances@leeds.ac.uk

Topics for initial volumes of the series Advances in Critical Zone Science could include the following:

- > Mineral weathering and geochemistry of the CZ
- > Architecture and evolution of the CZ
- > Water flow and transport dynamics in the CZ
- Biogeochemistry of the CZ
- CZ processes in Earth systems
- > Geobiology, biodiversity and ecology of the CZ
- > Volumes featuring advances in measurement techniques
- Modelling CZ processes
- Human impacts on the CZ
- > The Critical Zone in Urban Environments
- > Evolution of the CZ in a warming world/Threshold phenomena
- > CZ provisioning of environmental goods and services
- > The Coastal Critical Zone

Earth's critical zone is the near-surface layer of the planet which determines the availability of lifesustaining resources - extending from the surface of unaltered bedrock to the atmospheric boundary layer. Critical zone science is the interdisciplinary study of the natural processes that shape the critical zone and determine its evolution and the effects of natural and human-induced change.

The rapid expansion of CZ science and its growing relevance across a range of disciplines and global challenges means the time is ripe for a new series of books that will synthesise the current state of knowledge in key areas of CZ science, highlight new research results, and suggest exciting avenues for future investigation. Books in the series will be edited or authored by leading international experts at the forefront of Critical Zone Science. Each volume will be relatively short, on the order of 150-350 pages in length, and have a target audience comprising advanced students, researchers, and applied scientists engaged with the research agenda.

The aim of the series is to present the study of Earth's critical zone as a new field of integrative science. The scientific content draws on interdisciplinary research and subject expertise from the basic sciences of physics, chemistry, biology and mathematics, and applied sciences such as geological sciences, ecological sciences, environmental sciences, human and physical geography, engineering and expertise at the interface of applied research with policy and practice.