



## Publisher Information

Source: Mountain Research and Development, 42(3)

Published By: International Mountain Society

URL: <https://doi.org/10.1659/0276-4741-42.3.p2>

---

BioOne Complete ([complete.BioOne.org](https://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](https://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

## Mountain Research and Development (MRD)

An international, peer-reviewed open access journal  
published by the International Mountain Society (IMS)  
[www.mrd-journal.org](http://www.mrd-journal.org)

### Publisher

*Mountain Research and Development (MRD)*  
(online ISSN 1994-7151, print ISSN 0276-4741)  
is published by the International Mountain  
Society (IMS), c/o Centre for Development and  
Environment, University of Bern,  
Mittelstrasse 43, 3012 Bern, Switzerland.

### Institutional Members of the International Mountain Society (IMS)

**Andean Initiative**, International Potato Center,  
Lima, Peru

**ARU**, Afromontane Research Unit, University of  
the Free State, Phuthaditjhaba, South Africa

**CDE**, Centre for Development and  
Environment, University of Bern,  
Switzerland

**CIRM**, Interdisciplinary Centre for Mountain  
Research, University of Lausanne,  
Switzerland

**CMN**, Canadian Mountain Network, University  
of Alberta, Edmonton, Canada

**CONDESAN**, Consortium for the Sustainable  
Development of the Andean Ecoregion,  
Lima, Peru

**FAO**, Food and Agriculture Organization of  
the United Nations, Rome, Italy

**FoLAP**, Forum Landscape, Alps, Parks, Bern,  
Switzerland

**GLOMOS**, Global Mountain Safeguard  
Research, United Nations University  
Institute for Environment and Human  
Security, Bonn, Germany and Eurac  
Research, Bolzano, Italy

**ICIMOD**, International Centre for Integrated  
Mountain Development, Kathmandu, Nepal

**IGF/ÖAW**, Institute for Interdisciplinary  
Mountain Research, Austrian Academy of  
Sciences, Innsbruck, Austria

**IMHE**, Institute of Mountain Hazards and  
Environment, Chinese Academy of Sciences,  
Chengdu, China

**MRI**, Mountain Research Initiative, Bern,  
Switzerland

**UCAS**, University of Chinese Academy of  
Sciences, Beijing, China

MRD collaborates with Mountain Forum and  
The Mountain Partnership to further the cause  
of mountains on the international development  
and research agendas.

### Editorial Office

Thomas Breu, Editor-in-Chief  
Pema Gyamtsho, Editor-in-Chief  
Yanfen Wang, Editor-in-Chief  
Sarah-Lan Mathez-Stiefel, Associate Editor  
Brigitte Portner, Associate Editor  
Susanne Wymann von Dach, Associate Editor  
Carolina Adler, MountainMedia Editor  
Marlène Thibault, Assistant Editor  
Production Editors at Allen Press

### International Editorial Board

Irasema Alcántara-Ayala (Mexico), João Carlos  
Azevedo (Portugal), Ruchi Badola (India), Jörg

Balsiger (Switzerland), Jill M. Belsky (USA),  
Oliver Bender (Austria), Astrid Björnsen  
Gurung (Switzerland), Rosalind Bryce (UK),  
Vincent Ralph Clark (South Africa), Peng Cui  
(China), Thomas Dax (Austria), Andrea Fischer  
(Austria), Yayoi Fujita Lagerqvist (Sweden),  
Georg Gratzler (Austria), H. Ricardo Grau  
(Argentina), Andreas Heinimann (Switzerland),  
Thomas Hofer (Thailand), Bahadar Nawab  
Khattak (Pakistan), Hermann Kreutzmann  
(Germany), Karina Liechti (Switzerland), Bancy  
Mati (Kenya), Graham McDowell (Canada),  
Joanne Millar (Australia), Geoffrey Mukwada  
(South Africa), Sara Nowreen (Bangladesh),  
Marcus Nüsser (Germany), Iago Otero  
(Switzerland), Stefano Pagiola (USA), Davnah  
Payne (Switzerland), Manuel Peralvo (Equador),  
Julio Postigo (USA), Emmanuel Reynard  
(Switzerland), Nadine Salzmann (Switzerland),  
Dietrich Schmidt-Vogt (Germany), Stefan  
Schneiderbauer (Italy), Eklabya Sharma (India),  
Surendra Pratap Singh (India), Thomas  
Streifeneder (Italy), Joerg Szarzynski (Germany),  
Yanhong Wu (China), Maria Wurzinger  
(Austria), Jianchu Xu (China), Kai Xue (China),  
Gete Zeleke (Ethiopia), Wei Zhao (China), Anne  
Zimmermann (Switzerland).

### Representatives of IMS Institutional Members

Carolina Adler (MRI, Switzerland); María  
Argüello (CONDESAN, Peru); V. Ralph Clark  
(ARU, South Africa); Stef de Haan (Andean  
Initiative, Peru); Andrea Fischer (IGF/ÖAW,  
Austria); Yonggang Ge (IMHE, China);  
Rosalaura Romeo (FAO, Italy); Nicole Olivier  
(CMN, Canada); Emmanuel Reynard (CIRM,  
Switzerland); Stefan Schneiderbauer and Joerg  
Szarzynski (GLOMOS, Italy and Germany);  
Ursula Schüpbach (FoLAP, Switzerland);  
Theresa Tribaldos (CDE, Switzerland); Laurie  
Ann Vasily (ICIMOD, Nepal); Kai Xue (UCAS,  
China).

### Publication Policy

*Mountain Research and Development* is published  
quarterly by the International Mountain  
Society and is freely available online and open  
access in collaboration with BioOne ([https://  
bioone.org/journals/mountain-research-and-  
development](https://bioone.org/journals/mountain-research-and-development)).

The journal is subject to the terms of the  
Creative Commons Attribution License ([http://  
creativecommons.org/licenses/by/4.0](http://creativecommons.org/licenses/by/4.0)).  
Ownership of the copyright in articles is  
retained by the authors, but anyone may read,  
download, copy, reuse, distribute, print, search,  
and link to the full texts of articles in MRD  
**provided that the original authors and source  
are properly acknowledged and cited.** For any  
reuse or redistribution of a work, the license  
terms under which the work was published  
must be made clear.

### Print Version

The MRD Editorial Office supplies print-ready  
PDF files of individual articles or entire issues

including covers for delocalized printing to  
Institutional Members of the IMS upon  
request. Authors and readers may produce  
their own printouts from the downloadable  
PDFs available at [https://bioone.org/journals/  
mountain-research-and-development/issues](https://bioone.org/journals/mountain-research-and-development/issues).

### Indexing

MRD is indexed in the Science Citation Index,  
Current Contents/Agriculture, Biology and  
Environmental Sciences, Web of Science,  
BIOSIS Previews, Geo Abstracts, C.A.B.  
International Series Checklist, AGRICOLA  
databases, Meteorological and Geostrophical  
Abstracts (MGA), CABS (Current Awareness in  
Biological Sciences), and others. MRD is also  
listed in the Directory of Open Access Journals  
(DOAJ), ProQuest, EBSCO, and Gale/Cengage  
Learning.

### Correspondence

*Please address correspondence to:*

MRD Editorial Office  
Centre for Development and Environment  
University of Bern  
Mittelstrasse 43  
3012 Bern, Switzerland  
E-mail: [mrd-journal.cde@unibe.ch](mailto:mrd-journal.cde@unibe.ch)  
Internet: [www.mrd-journal.org](http://www.mrd-journal.org)

**Please note that all papers must be submitted  
online.**

See <https://www.mrd-journal.org/for-authors/>

*Please send material for "MountainMedia" to:*

Dr. Carolina Adler  
Executive Director, Mountain Research  
Initiative  
MRI Coordination Office  
Centre for Development and Environment (CDE)  
University of Bern  
Mittelstrasse 43  
3012 Bern  
Switzerland  
E-mail: [mm-editor@  
mountainresearchinitiative.org](mailto:mm-editor@mountainresearchinitiative.org)

### Back Issues

MRD is published online and open access in  
collaboration with BioOne. All back issues of  
MRD from 2000 onwards are available online  
and free of charge through BioOne; previous  
issues (1981–2000) are available online through  
JSTOR ([www.jstor.org](http://www.jstor.org)), and single articles as  
well as entire issues may be purchased there.

For single hardcopy issue sales from Volume 20  
through Volume 28, please contact  
[mrd-info.cde@unibe.ch](mailto:mrd-info.cde@unibe.ch).

© 2022 International Mountain Society (IMS)  
for the journal

© 2022 Authors for the individual articles