Table of contents

1 Mountain research in Austria

Mountains under global change conditions – excellence strategies for Austrian mountain research Axel Borsdorf, Georg Grabherr & Johann Stötter	12
Mountain and global change research programmes in Austria Günter Köck	16
The mountain research focus of the University of Innsbruck Roland Psenner & Reinhard Lackner	20
alpS – Centre for Climate Change Adaptation Technologies Matthias Monreal & Eric Veulliet	24
2 Global change	
Climate change – downscaling the global dimension to regions Christian Georges	30
Alpine permafrost: a rock glacier inventory of South Tyrol based on laser-scanning data Matthias Monreal & Johann Stötter	40
A worldwide observation of effects of climate change on mountain ecosystems Georg Grabherr, Harald Pauli & Michael Gottfried	48
Mount Schrankogel (3 497 m, Stubaier Alpen, Tyrol) – the GLORIA pioneer master site Harald Pauli, Michael Gottfried, Christian Klettner & Georg Grabherr	58
Soils as archives of natural and cultural history; examples from the Eastern Alps Clemens Geitner	68
Shallow erosion in grassland areas in the Alps. What we know and what we need to investigate further Christoph Wiegand & Clemens Geitner	76
3 Living in the mountains – living with risks	
Mountains at risk Johann Stötter & Matthias Monreal	86
Are alpine regions especially affected by natural hazards? Meso-scale assessment of economic resilience and vulnerability based on the 2005 floods in the Austrian federal states of Tyrol and Vorarlberg	94

Table of contents

Risks in the Andean metropolises *Rafael Sánchez**	102
4 Challenges for the future	
Leisure landscapes and urban agglomerations – disparities in the Alps Manfred Perlik	112
Cultural landscape, traditional food and tourism. Rural development in the "Franconian Switzerland" (Bavaria, Germany) and in the Wachau (Lower Austria) Oliver Bender	120
Women – indispensable actors in sustainable development of alpine agriculture Mathilde Schmitt	128
Transit traffic in the Alps and the Andes. One phenomenon, different perceptions Sigrun Kanitscheider	136
5 Paths towards sustainability	
Paths to sustainable development in the Andes Carla Marchant	146
The hydroelectrical potential of North-Western Patagonia – balancing economic development and ecological protection Axel Borsdorf	154
Regional management is social work! Activating social capital as a key task of regional managers – the case of the Biosphere Reserve Wienerwald Falk F. Borsdorf	162
Quality of life in the Alps. Developing a scientific model on an elusive geographical topic Lars Keller	170
6 Products	
eco.mont – Journal on Protected Mountain Areas Research and Management Brigitte Scott & Valerie Braun	182
Mapping the Alps Axel Borsdorf, Ulrike Tappeiner & Erich Tasser	186

Table of contents

The authors	219
Mountains, their resources and risks – common goods or common concerns? Bruno Messerli	211
Afterword	
Closing the gap between science and practice. mountain.TRIP – an EU project coordinated by IGF Fides Braun	204
Alpine knowledge gardening – research networks for the advancement of science and development Astrid Björnsen Gurung	197
The interactive alpine information system GALPIS Oliver Bender, Axel Borsdorf & Kati Heinrich	192