

## Research Focus Alpine Space - Man and Environment

The Research Focus Alpine Space–Man & Environment, established in 2010, is – beside Physics and Molecular Biosciences – one of the three research foci of the University of Innsbruck. It is not by chance that the University of Innsbruck is focussing on mountain issues. Innsbruck is located in the middle of the Alps and its history, culture and economy are deeply affected by mountains. Beside these local and regional aspects, mountains have a pivotal importance for humans: Half of the human population depends on mountains in one way or another, and mountains cover (depending on the definition) between 12 and 26% of the ice-free terrestrial area. About 20% of the human population lives in mountains or their immediate forelands.

A characteristic aspect of mountain research, however, is the lack of interdisciplinarity or multidisciplinary. Accordingly, an important objective of the research focus of the University of Innsbruck is to establish stronger links between all disciplines that work in alpine or mountain research, i.e. humanities, social, natural and technical sciences, and to bring together basic research and application, for instance by cooperating with alpS, the Centre for Climate Change and Adaptation Strategies.

An overview of structure and objectives of the research focus, its nine research centres and four partners is given in Fig. 1. The nine research centres are hosted by eight different faculties (Architecture; Biology; Civil Engineering; Earth and Atmospheric Sciences; Economics and Statistics; Political Science and Sociology; Philosophy and History; Psychology and Sports). It covers, thus, a large range of disciplines, from history to agriculture, and from biology to socio-economy.

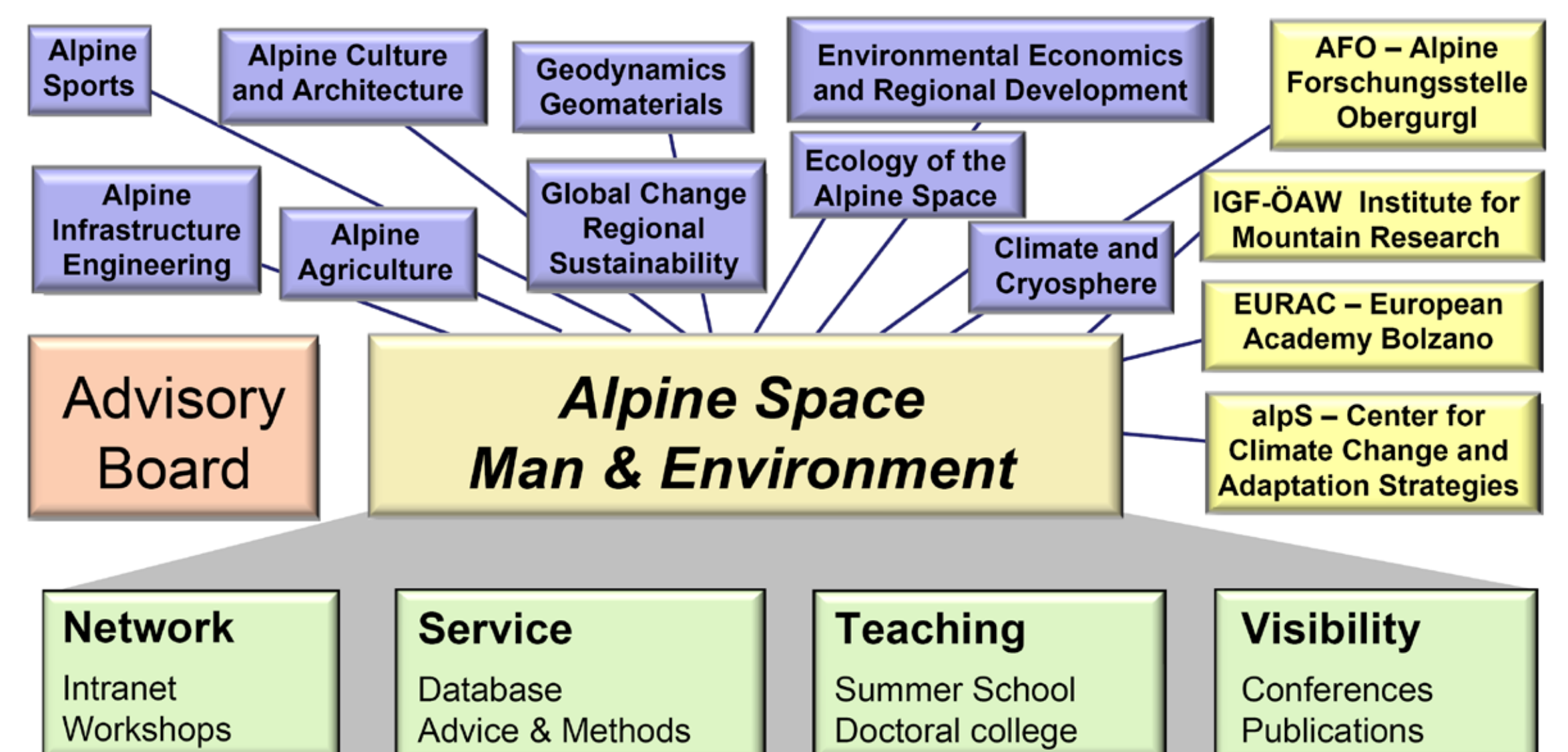


Fig. 1 Structure and objectives of the Research Focus with its Research Centers (blue) and partners (yellow)

### Targets

The Research Focus is aiming at increasing quality and quantity of scientific publications. It will actively cooperate with international organisations of mountain research, and establish a Long-term Socio-ecological Research (LTSER) program in the Tyrolean Alps. In addition, the Research Focus will transfer scientific knowledge to the public by publications that deal with mountain problems and via knowledge-databases accessible by the public via the internet.

1. We must develop long-term research programs. Special attention has to be paid to interdisciplinary projects focusing on the relation between man and environment. The international visibility is fostered by joining international activities and programmes.
2. The focus must not be set on a single institution. Innovation is pivotal to progress while existing projects, cooperations, and networks persist.
3. The advancement of mountain research, in particular of research in the Alpine space, includes targeted support of young scientists and capacity building.
4. International cooperation of Austrian scientists and institutions is lead by the Austrian Academy of Sciences. These activities should be enhanced through ISCAR (International Scientific Committee for Research in the Alps) and bilateral agreements.
5. International conferences are a touchstone for the visibility of Austrian research. It's a good idea that scientists are accompanied by professionals in public relations.

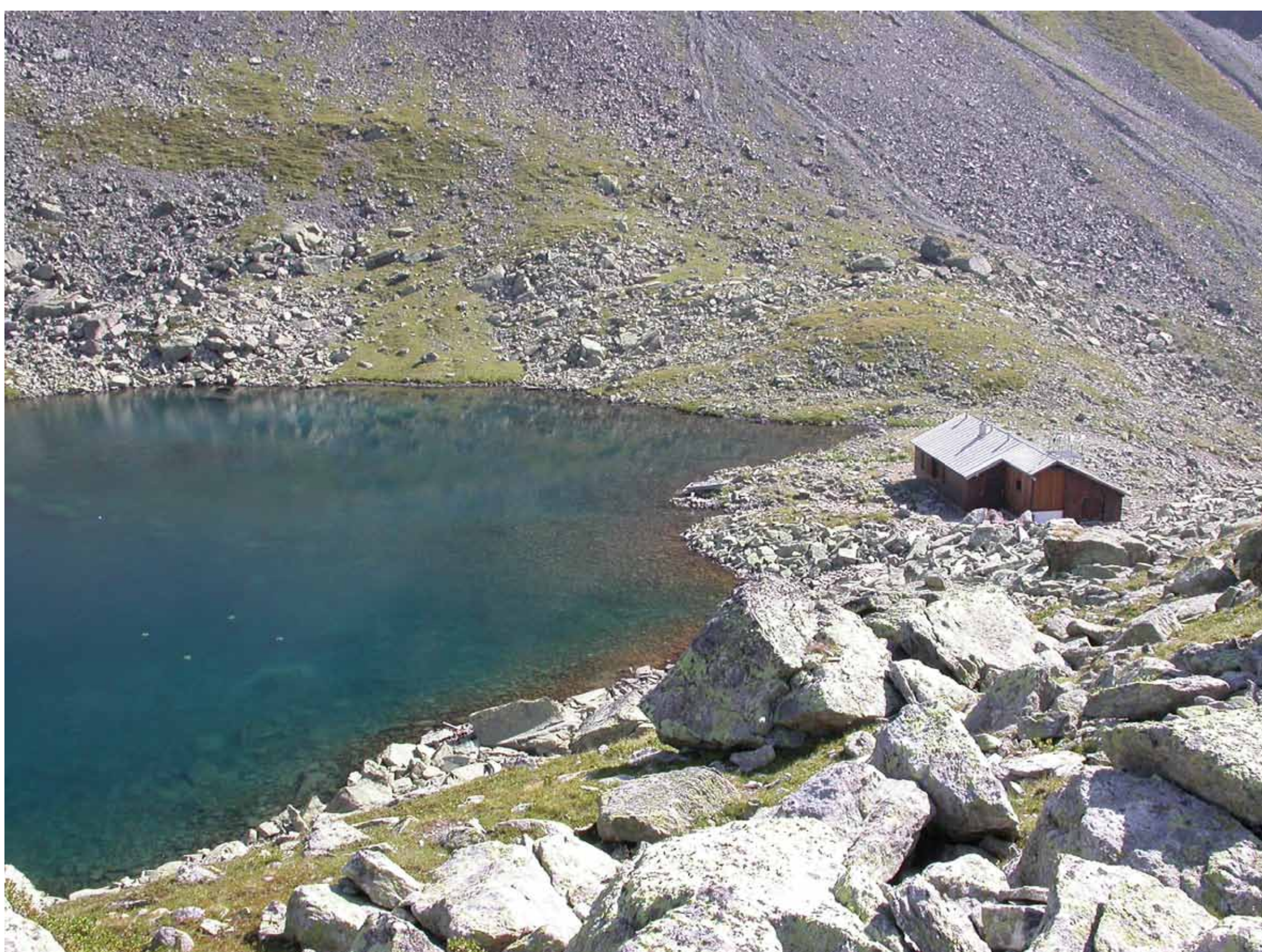


Fig. 2. Limnological research station in the UNESCO Biosphere Reserve Gossenköllesee, 2417 m a.s.l.

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## Positioning Innsbruck University

Körner (2009) stated that the best way to find publications about mountains, high elevations or high altitudes is to use “alpine” as a keyword, since it generally covers studies about different mountain ranges. Ever since Humboldt, the term “alpine” has been synonymous with the vegetation zone above the tree line. However, it is often used for other altitudinal zones and also in a geographical sense (i.e., the Alps). Thus “alpine” can be considered a relevant keyword in a variety of different scientific fields, such as linguistics, geography and biology.

From 1899 to 2010 approximately 19,000 publications in the Web of Science contained the keyword “alpine”. The most productive institution was ETH Zurich, followed by the Universities of Innsbruck, Bern, Colorado, Basel, Zurich, Vienna, Otago, Milan and Grenoble, while the ten most productive countries were USA, Switzerland, Italy, France, Germany, Austria, Canada, England, China and New Zealand.

Körner, C. 2009. Global statistics of “mountain” and “alpine” research. Mountain Research and Development 29: 97-102

## Publications

The research focus publishes a series ‘alpine space - man and environment’, initiated in 2006. The following books have been published so far:

1. Die Alpen im Jahr 2020 / The Alps in 2020
2. Politische, kulturelle und wissenschaftliche Perspektiven der nachhaltigen Raumentwicklung in den Alpen / Political, cultural and scientific perspectives of sustainable spatial development in the Alps
3. The Water Balance of the Alps: what do we need to protect the water resources of the Alps?
4. Ist es der Sindtfluss? Kulturelle Strategien & Reflexionen zur Prävention und Bewältigung von Naturgefahren / Is it the deluge? Cultural strategies and reflections on preventing and handling natural risks
5. Über Almen: zwischen Agrikultur und Trashkultur / About mountain pastures: between agriculture and trash culture
6. Klimawandel in Österreich. Die letzten 20 000 Jahre... und ein Blick voraus / Climate change in Austria. The last 20 000 years... and a look ahead
7. Global Change and Sustainable Development in Mountain Regions
8. Karl Außerhofer: Das Kriegstagebuch eines Soldaten im Ersten Weltkrieg
9. Die Alpen – Einblicke in die Natur / The Alps – insights into nature
10. Der Biosphärenpark als Leitinstrument / The biosphere reserve as managing instrument
11. Zwei Alpentäler im Klimawandel / A tale of two valleys
12. Le Alpi che cambiano tra rischi e opportunità / Die Alpen im Wandel zwischen Risiken und Chancen / Changing Alps between risks and chances
13. Coole Forschung: Lernen und Forschen im Internationalen Polarjahr 2007/2008

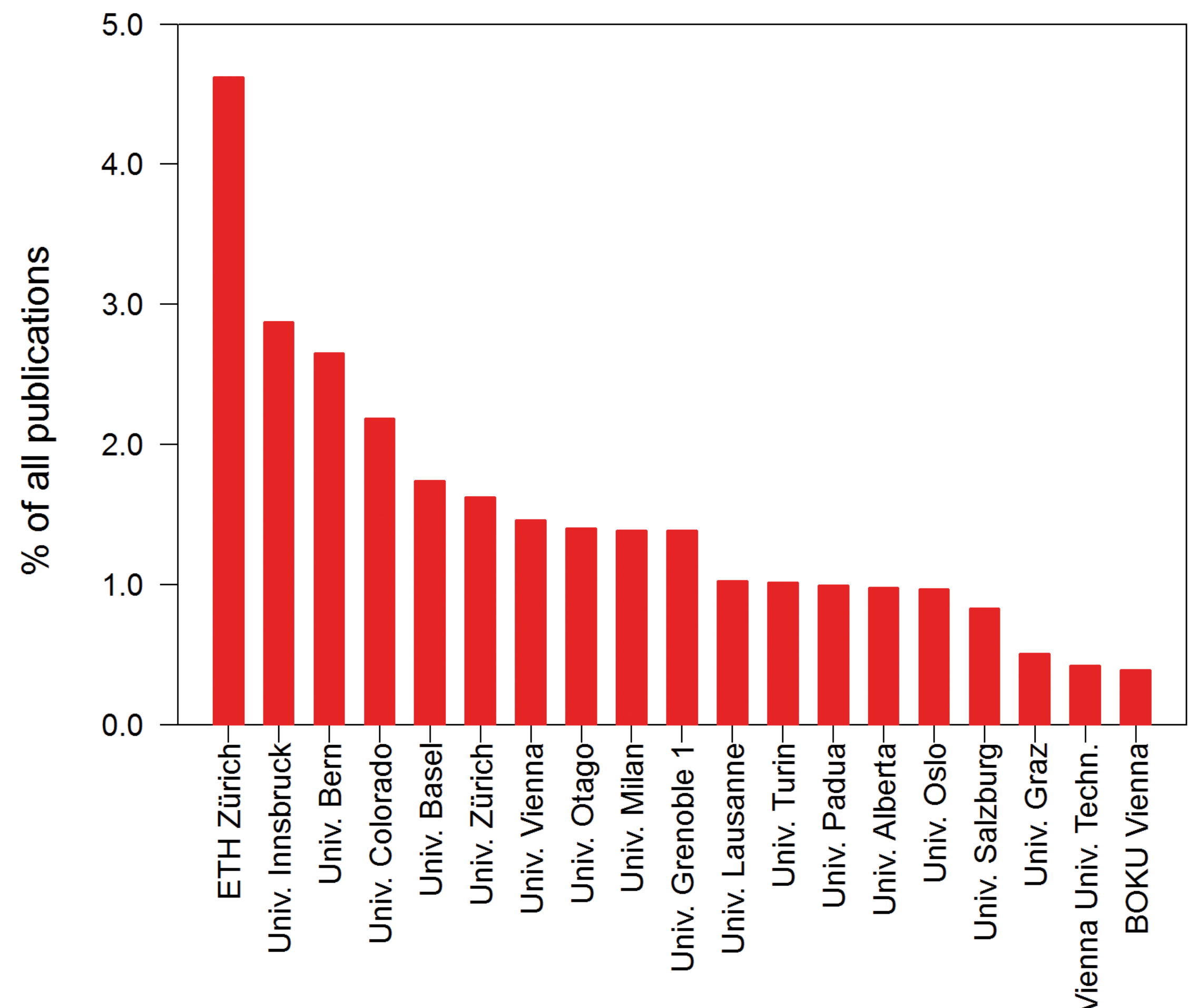


Fig. 3. Number of institutional affiliations on papers on alpine literature 1899-2010 of institutions with at least 20 relevant papers (SCI-EXPANDED, SSCI and A&HCI, N=18,157; Psenner & Gaigg, unpubl.)

