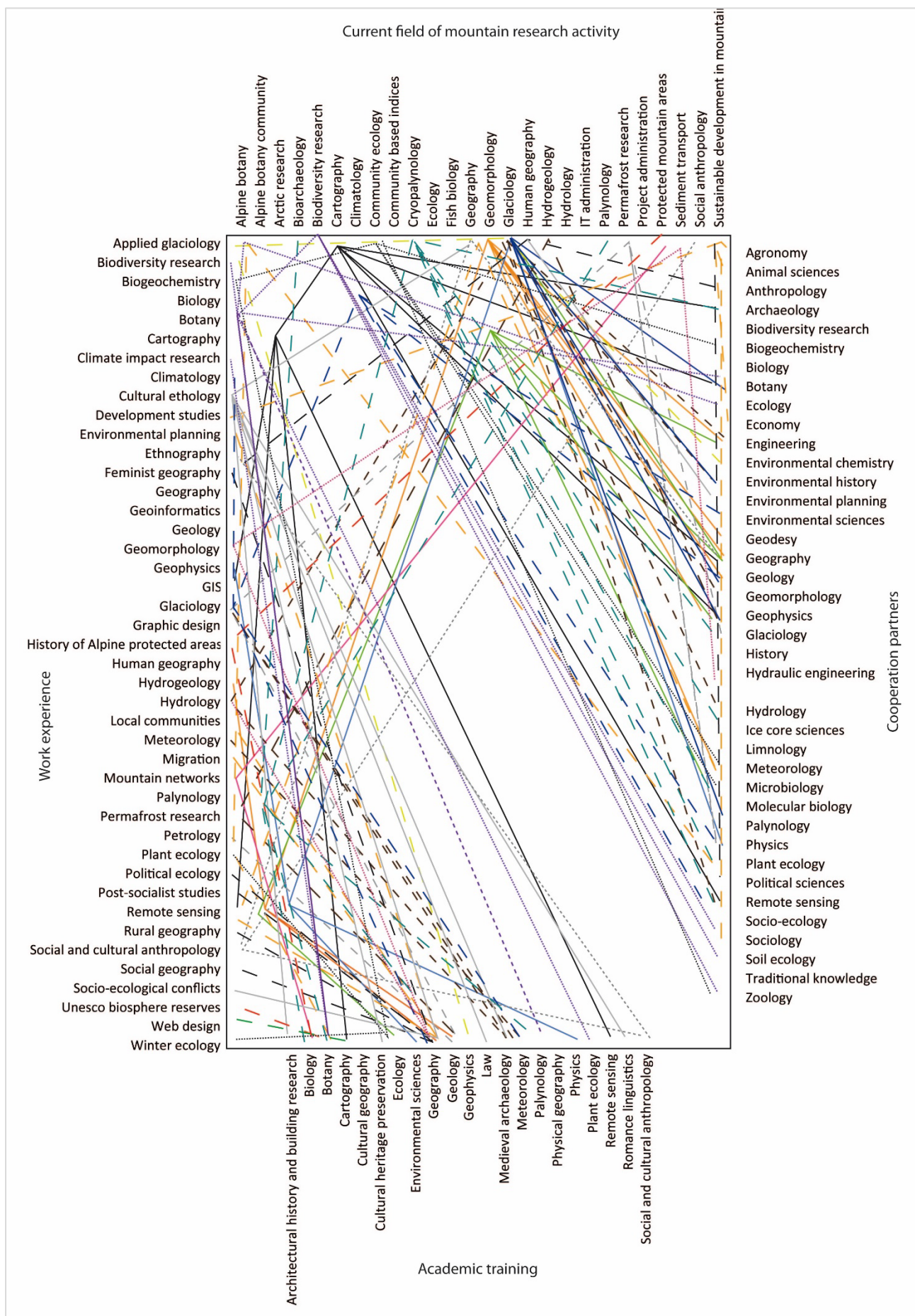


Supplemental material for

“Joint Endeavor Toward Sustainable Mountain Development: Research at the Institute for Interdisciplinary Mountain Research of the Austrian Academy of Sciences”, by Manfred Bardy-Durchhalter, Oliver Bender, Giulia Bertolotti, Domenico Branca, Valerie Braun, Pascal Bohleber, Daniela Festi, Andrea Fischer, Andreas Gschwentner, Lea Hartl, Andreas Haller, Kay Helfricht, Clemens Hiller, Kati Heinrich, Andrina Janicke, Margreth Keiler, Günter Köck, Armin Kratzer, Andrea Lamprecht, Harald Pauli, Annemarie Polderman, Jan Pfeiffer, Fernando Ruiz Peyré, Patrick Saccone, Brigitte Scott, Bernd Seiser, Martin Stocker-Waldhuber, and Thomas Zieher, published in *Mountain Research and Development* 42(1), 2022. (See <https://bioone.org/toc/mred/42/1>)

FIGURE S1 Pathways of academic development and cooperation within the team of the Institute for Interdisciplinary Mountain Research (IGF) from basic academic training and work experience to current fields of research and the respective partners, with different line styles representing the individual researchers.



BOX S1: Main research questions guiding current research efforts of the IGF Team

- Are slope movements in (selected) mountains currently accelerating?
- How can we better identify and describe the drivers of (recent) slope movements?
- How unprecedented is the current glacier retreat, and how does it affect people?
- How can we combine data across temporal and spatial scales to better understand variability and connections between local processes and regional trends?
- How can we find the extent of human impact on vegetation in the past in connection with sustainability?
- Which processes govern the incorporation of pollen in the ice?
- Which land use changes took place in the Holocene and in recent centuries?
- How do the material and social dimensions in mountains influence each other?
- The mediating role of local interaction in the response of cold ecosystems to global changes
- What are the changes in fluvial sediment transport in a changing proglacial environment?
- How does glacier mass loss change the hydrology of proglacial areas and links fluvial sediment transport from glacier forefields to human infrastructure?
- What drives the dynamics of rock glaciers and changes in glacier mass balance?
- How do means, variabilities and extremes in cryospheric long-term monitoring fit to present and paleo records?
- What are the outflow dynamics of rock glaciers and the origin of heavy metals in glacier-fed rivers?
- How do glaciers behave in terms of decay in the near future, and how can we continue historical long-term monitoring?
- How can we better understand local, inclusive, sustainable development in the mountains?
- How can we make mountain regions and communities more resilient and liveable places?
- How do urbanization processes impact on vertical land use systems in mountains?
- How have alpine vegetation patterns changed in recent decades?
- What are the main drivers for the changes (climatic, e.g. warming, drought; land use, e.g. overgrazing) and how big is their impact?
- How do changes in alpine (plant)biodiversity patterns and plant community indices differ across regions/zonobiomes/ecozones? What similarities can be found between them?
- Do observed changes indicate a transformation towards homogenization of some high mountain ecosystems?
- What are the main drivers of biodiversity loss and where are the regional hotspots of losses?
- What are the effects of climate change on the heavy metal and organotoxicant contamination of fish populations in Arctic and high mountain lakes? How does it affect local people?