ROMI

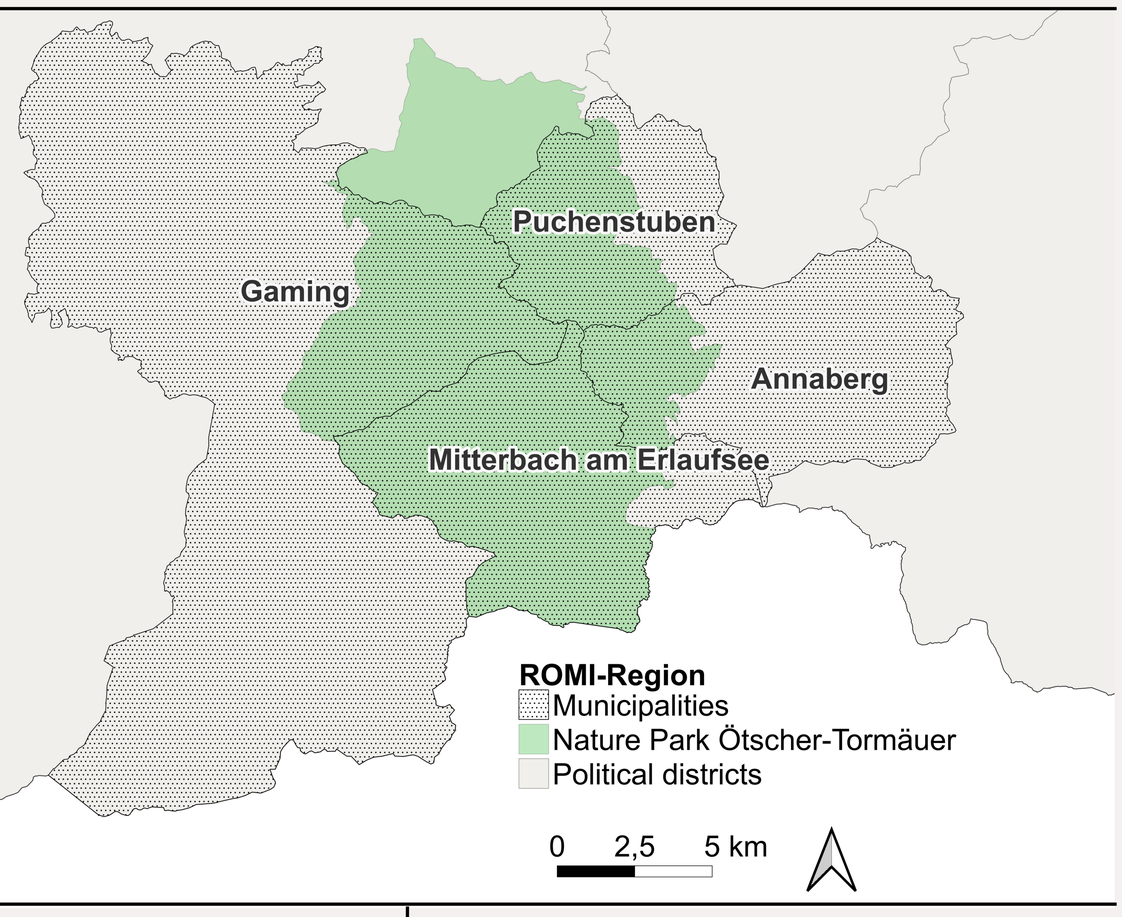
Regional resilience based on ecological, economic and social knowledge and innovation in the Ötscher region

Ulrike Pröbstl-Haider[1], Walter Seher[2], Tatjana Fischer[2],
Meike Jungnickel[1], Alice Wanner[1], Klaudia Kainz[2]

1 Institute of Landscape Development, Recreation and Conservation Planning
2 Institute of Spatial Planning, Environmental Planning and Land Rearrangement
University of Natural Resources and Life Science

INTRODUCTION

In mountainous areas the effects by climate change on tourism are interconnected with other land use changes. Transformative change and resilience are only attainable if all changes are considered in an integrated manner. In the past, innovative applications in the context of rural resilience have mostly been developed for specific disciplines. Therefore an integrated view on regional development in close cooperation with local stakeholders has so far not been developed.



AIMS

- Exploring regional structures in a transdisciplinary manner and to define the preconditions for a regional approach
- Developing key factors for a resilience framework, as well as its criteria and indicators based on multidisciplinary approach (SES based)
- Understanding, measuring and analyzing key factors for regional resilience, their relevance and their possible interactions
- Using this knowledge for a transformation process based on a transdisciplinary approach aimed at different adaptive pathways

METHODS

- Socio-Ecological Modeling
  - Qualitative Interviews
  - Survey
  - Social Network Analysis
  - Ecosystem Service Modelling
- Dynamic Adaptive Pathways (DAP)
  - Scenario Development with local stakeholders
  - Discrete Choice Experiments (DCE)

VULNERABILITY TO CLIMATE CHANGE

- Agriculture & Forestry
  - Small extension of growing season
  - Higher likelihood of bark beetle infestation
- Tourism
  - Potential positive effects for summer tourism
  - Winter tourism is likely to be negatively affected
- Extreme Precipitation Events
  - Severe and extreme precipitation events are projected to increase

UNDERSTANDING THE SOCIO-ECOLOGICAL SYSTEM

NEXT STEPS

- Data Collection for Resilience Framework (Survey, Data analysis, Interviews)
- Workshops with Stakeholders regarding:
  - Social indicators
  - Possible dynamic adaptive pathways
- Development of dynamic adaptive Pathways
- Survey including Discrete Choice Experiment

Gefördert durch ACRP des Klima und Energie Fonds,
FFG grant no. F0999907894

Adam-Hernández, A. and Harteisen, U. (2019).
A Proposed Framework for Rural Resilience - How can peripheral village communities in Europe shape change? Ager. Revista de Estudios sobre Despoblación y Desarrollo Rural, no. 28, pp. 7-42. doi: 10.4422/ager.2019.05

Hat, K. and Stöglehner, G. (2019). How Resilient is Growth? Resilience Assessment of Austrian Municipalities on the Basis of Census Data from 1971 to 2011. Sustainability 2019, 11(6). doi: 10.3390/su11061818

Ifejika Speranza, C., Wiesmann, U., & Rist, S. (2014). An indicator framework for assessing livelihood resilience in the context of social–ecological dynamics. Global Environmental Change, 28, 109–119. https://doi.org/10.1016/j.gloenvcha.2014.06.005

Schouten, M.A.H.; van der Heide, C.M.; Heijman, W.J.M. & Opdam, P.F.M. (2012). A resilience-based policy evaluation framework: Application to European rural development policies. Ecological Economics. 81 p.165-175. doi: 10.1016/j.ecolecon.2012.07.004

Stotten, R., Ambrosi, L., Tasser, E., & Leitinger, G. (2021). Social-ecological resilience in remote mountain communities: toward a novel framework for an interdisciplinary investigation. Ecology and Society, 26(3). https://doi.org/10.5751/ES-12580-260329

Virapongse, A. Brooks, S., Covelli, Metcalf, E., Zedalis, M., Gosz, J., Kliskey, A., Alessa, L., (2016), A social-ecological systems approach for environmental management, Journal of Environmental Management, Volume 178, Pages 83-91, https://doi.org/10.1016/j.jenvman.2016.02.028