

# LEVERS Major levers in climate change adaptation in Austria

ACRP 15th Call, Nov 2023 - Oct 2025



Birgit Bednar-Friedl<sup>1</sup>, Stefan Kienberger<sup>2</sup>, Thomas Schinko<sup>3</sup>, Ines Omann<sup>4</sup>, Nina Knittel<sup>1</sup>, Raphaela Maier<sup>1</sup>, Jonas Peisker<sup>3</sup>, Anna Viktoria Rohrer<sup>1</sup>, Maxie Riemenschneider<sup>4</sup>, Raphael Spiekermann<sup>2</sup>, Thomas Thaler<sup>3</sup>, Johanna Wittholm<sup>2</sup>









DR. INES OMANN

NACHHALTIGE LEBENSQUALITÄT –
FORSCHUNG UND PROZESSBEGLEITUNG

### **Project Objectives**

- Identifying key risks for Austria, in strong coordination with the ongoing Second Austrian Assessment Report (AAR2) and using the burning ember methodology from IPCC AR6 WGII Chapter 16.
- Co-developing adaptation pathways with local adaptation stakeholders for three representative case study regions in Austria, discussing which sequence of adaptation bundles provide the best adaptation lever and why, considering existing path dependencies.
- Developing a hands-on guidance on how the approach of combining burning-embers and adaptation pathways can be applied in other adaptation regions in Austria and beyond.

### **Approach**

### WP2 Identification of Key Risks

- Existing knowledge on climate change impacts and risks are evaluated and the key risks for Austria are derived.
- Top-down information from IPCC AR6 and the First EU Climate Risk Assessment by the EEA is combined with a bottom-up identification and clustering of key risks in AAR2.

# WP3 Priorization of Adaptation Options and Combinations

 For the identified key risks, adaptation measures and bundles are prioritized based on the available scientific synthesis on effectiveness and feasibility.

### WP4 Adaptation Pathways for Case Studies

- Three representative regions: Retzer Land, StadtLandSee Bruck/Kapfenberg/Tragöß/St. Lorenzen, and city of Linz.
- Adaptation pathways with a time sequence of adaptation measures and bundles will be developed in case study workshops using future workshops and backcasting.

### WP5 Upscaling to Austria and Lessons Learned

- Adaptation pathways will be transferred to other Austrian regions.
- A hands-on guidance will be developed and policy recommendations will be derived.

### **First Results**

# Preliminary List of 4 Representative Key Risks for Austria:

- 1. Mortality and morbidity of people due to heat.
- 2. Loss in agriculture and forestry and ecosystem disruptions due to combined heat and droughts.
- Water scarcity, including lack of snow, to tourism and other sectors (energy, industry, water).
- Impacts of riverine and pluvial floods and mass movements on people, infrastructure and the economy.

# **Key Research Questions**

- 1. Which (bundles of) measures should be prioritized for implementation because they are particularly effective and feasible and therefore have the greatest lever?
- How can windows of opportunity, such as budget cycles or planning processes, be used best?
- 3. What is the best timely sequencing of measures, including the consideration of lead times?
- 4. When does a measure become ineffective or infeasible (adaptation limit) and should therefore be replaced by more transformational measures?

# Data obtained from filterature + databases Identify key risks Ilentify key risks Ilentify key risks Ilentify key risk synthesised in a database IPCC AR6 IPCC AR6 IPCC AR6 Identify adaptation options Include effectiveness of options to warming levels, bundle measures, identify tipping points Include effectiveness of options Include effectiveness of options Include effectiveness of options to warming levels, bundle measures, identify tipping points

# Next Steps

- March/April 2024: Data extraction on key risk evaluation completed.
- **March/April 2024:** Design and conceptualization of stakeholder workshops and stakeholder integration.
- April/May 2024: Burning embers workshops with 3-5 experts jointly with APCC Core Key Risk Team (online) & in person consolidation meeting.
- June 2024: Submission of burning embers to AAR2.
- **Sep 2024**: Workshop on effectiveness, feasibility and priorization of adaptation options.
  - Dec 2024/Jan 2025: Stakeholder workshops in case study regions.













