Project: **1237**

Project title: **Composing a joint D-A-CH climate scenario ensemble**

Principal investigator: **Nora Leps**

Report period: **2025-11-01 to 2026-10-31**

*Text: Maximum of two pages including figures. Reports for joint projects may be longer.*

All project tasks have been proceeding during 2026, due to an increase in work on national climate scenarios and related cross-border projects and exchanges. Only during Q3 resources expired because of reduced activities during summer break.

This year's activities, that are related to the main project tasks can be summarized as:

- Experiment No 2. "ESD and bias adjustment":

  1) Consolidation of a stable version of the empirical statistical downscaling method EPISODES: a) Validation of EPISODES simulations on various target grids (ERA5-Land, HYRAS, CERRA, SPARTACUS) and on station locations b) Exchange and comparison and discussion of validation results among the cooperating modeling groups (DWD, GeoSphere Austria) c) Improvements and adjustments to the method based on the validation results.

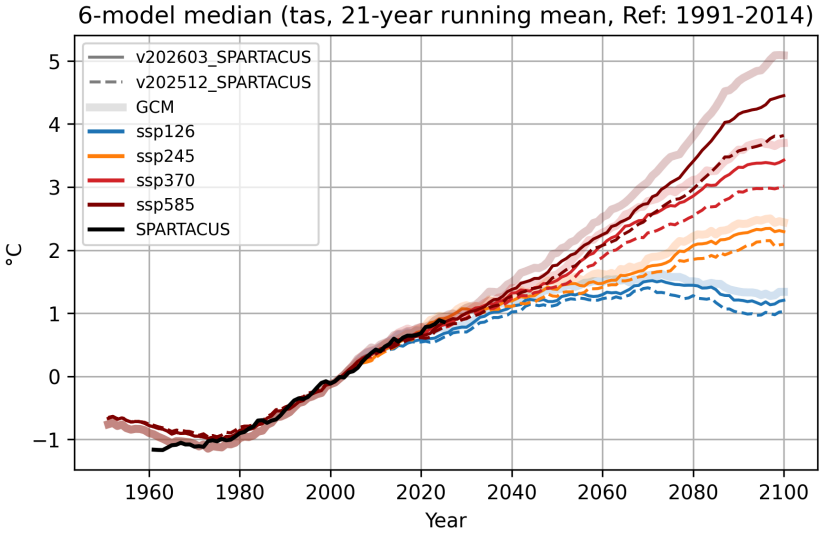



Fig.1 Comparison temperature trends of an older versus (dashed line) an improved version (thin solid line) of EPISODES versus GCM (thick shaded line) for different SSP-Scenarios. Mean of 6 selected raw GCMs and ESD-derived simulations.

- Experiment No 3. "RisKlim (Snow related extremes)":

  1) Processing of snow parameters for cross border regional climate simulations using the SNOWGRID-CL method: HYRAS, DWD-Referenz-Ensemble of 2018, EPISODES simulations of CMIP6-GCMs on an 1km SPARTACUS grid extended to Bavaria.

  2) Cross-border assessment of snow coverage in Austria and Bavaria, comparison of median trends versus year-to-year variations.

- Experiment No 1. "Model quality assessment":
  - Continued: Exchange of methods for model validation: Project members joined various groups of EURO-CORDEX validation activities, i.e. Validation of precipitation, validation of simulations in mountainous areas (with special focus on Alpine space) and trends.

All activities are currently making good progress and are planned to be continued during the next months.