

# Downscaling approaches for climate model projections in complex terrain

## From snow cover duration to meteorology

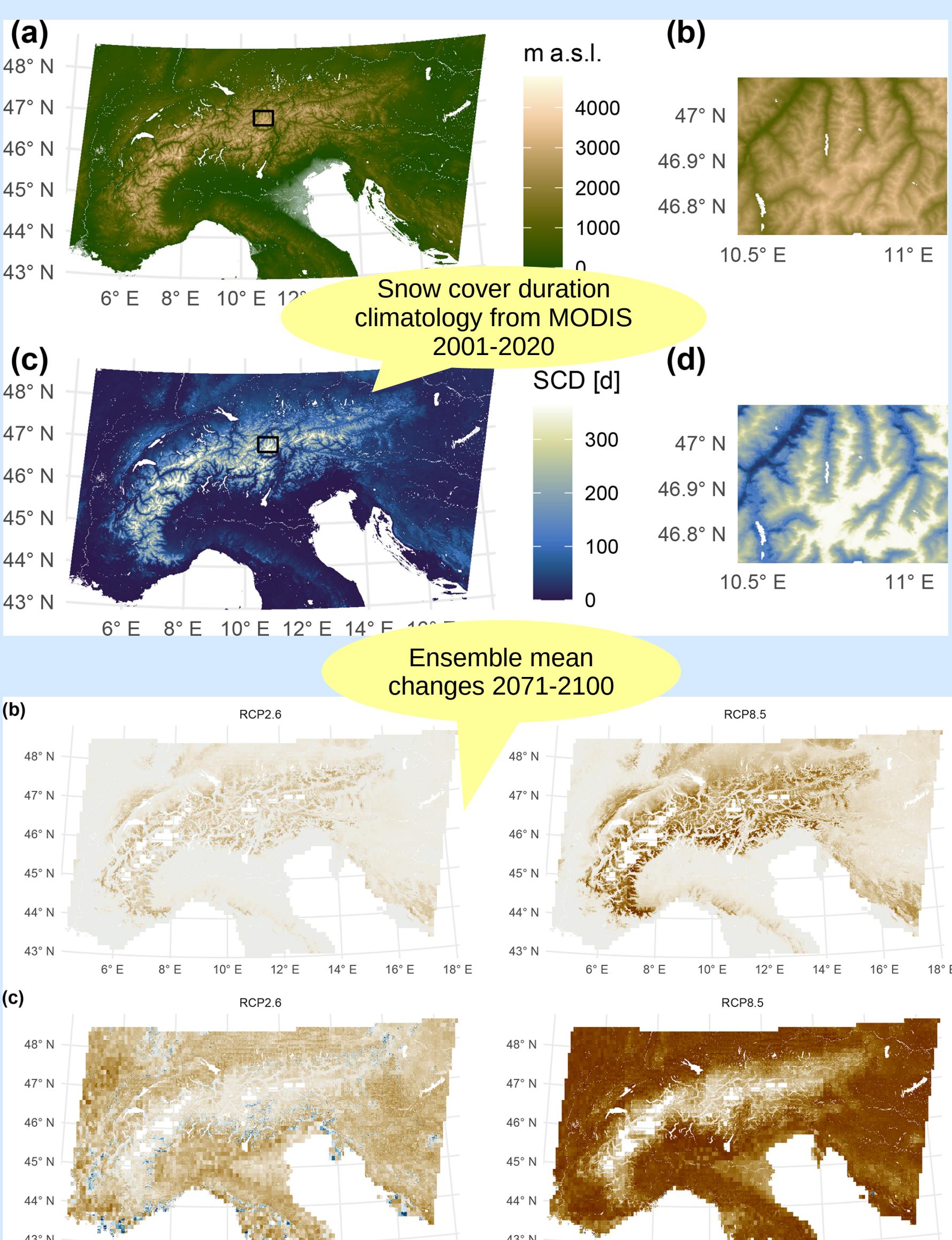
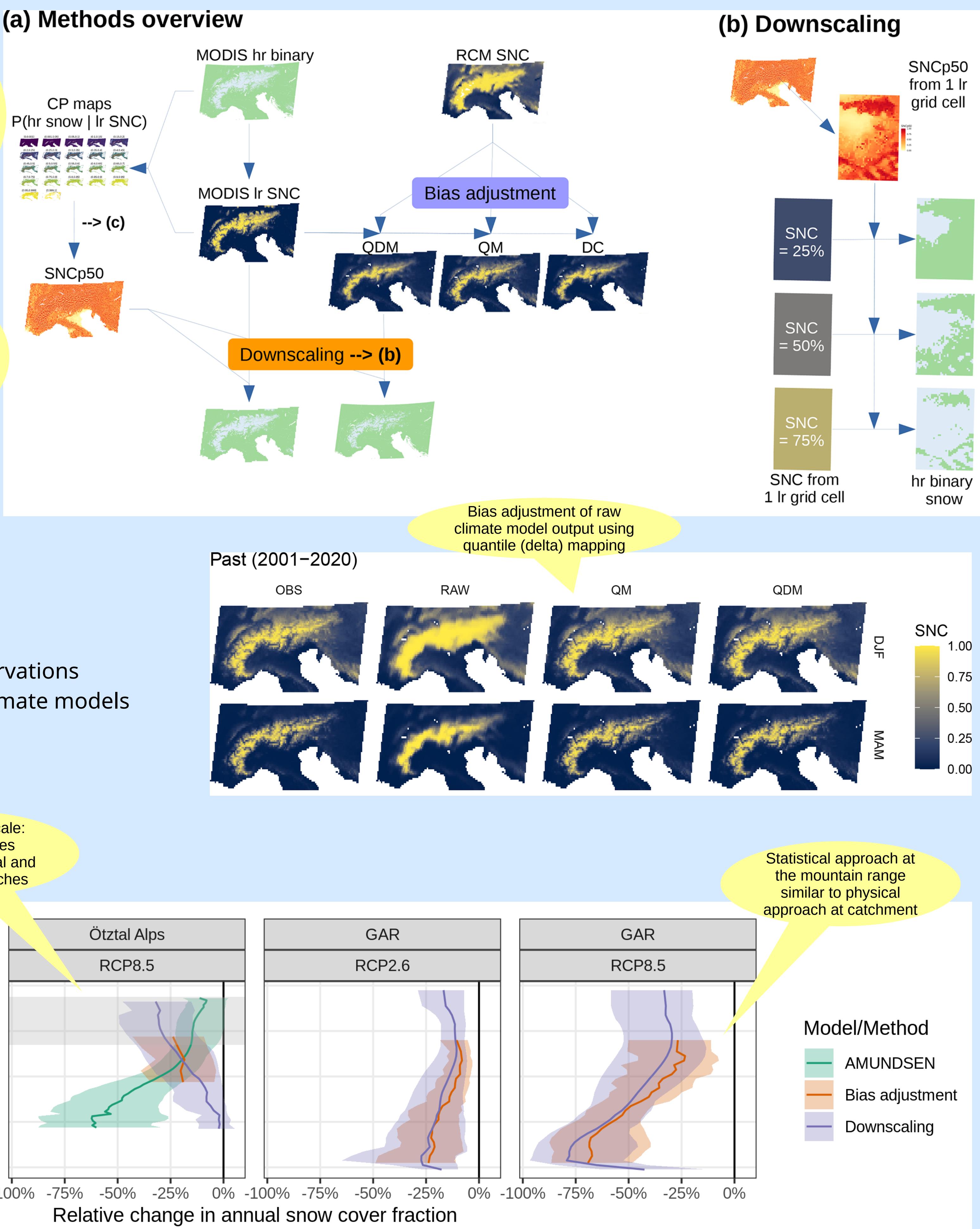
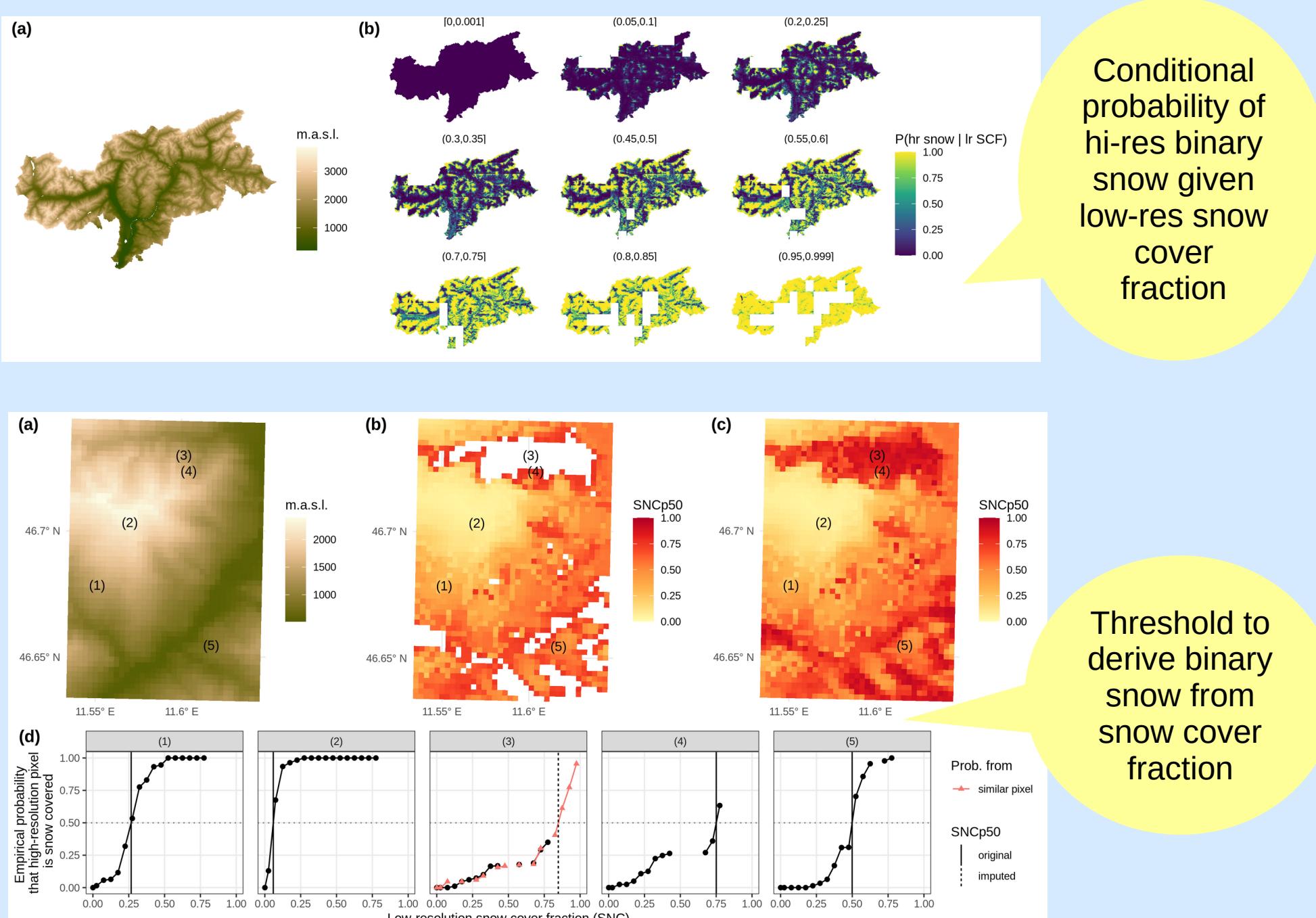
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### Empirical statistical downscaling of snow cover fraction from RCMs with MODIS

- Pros:**
- Fast
  - Transferable
  - Input data is openly and globally available
  - Allows using ensembles of climate models and different GHG scenarios

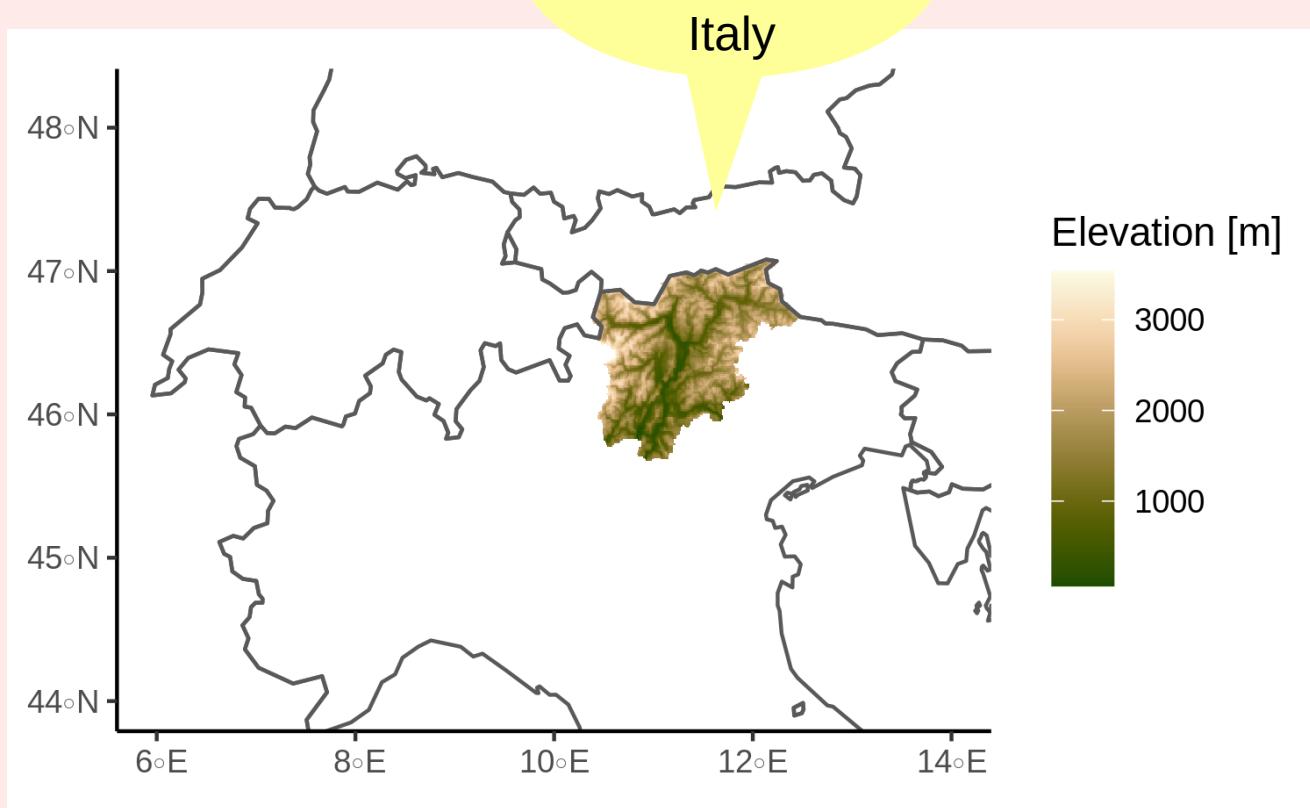


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### Climate change scenarios for complex mountain terrain



#### Project

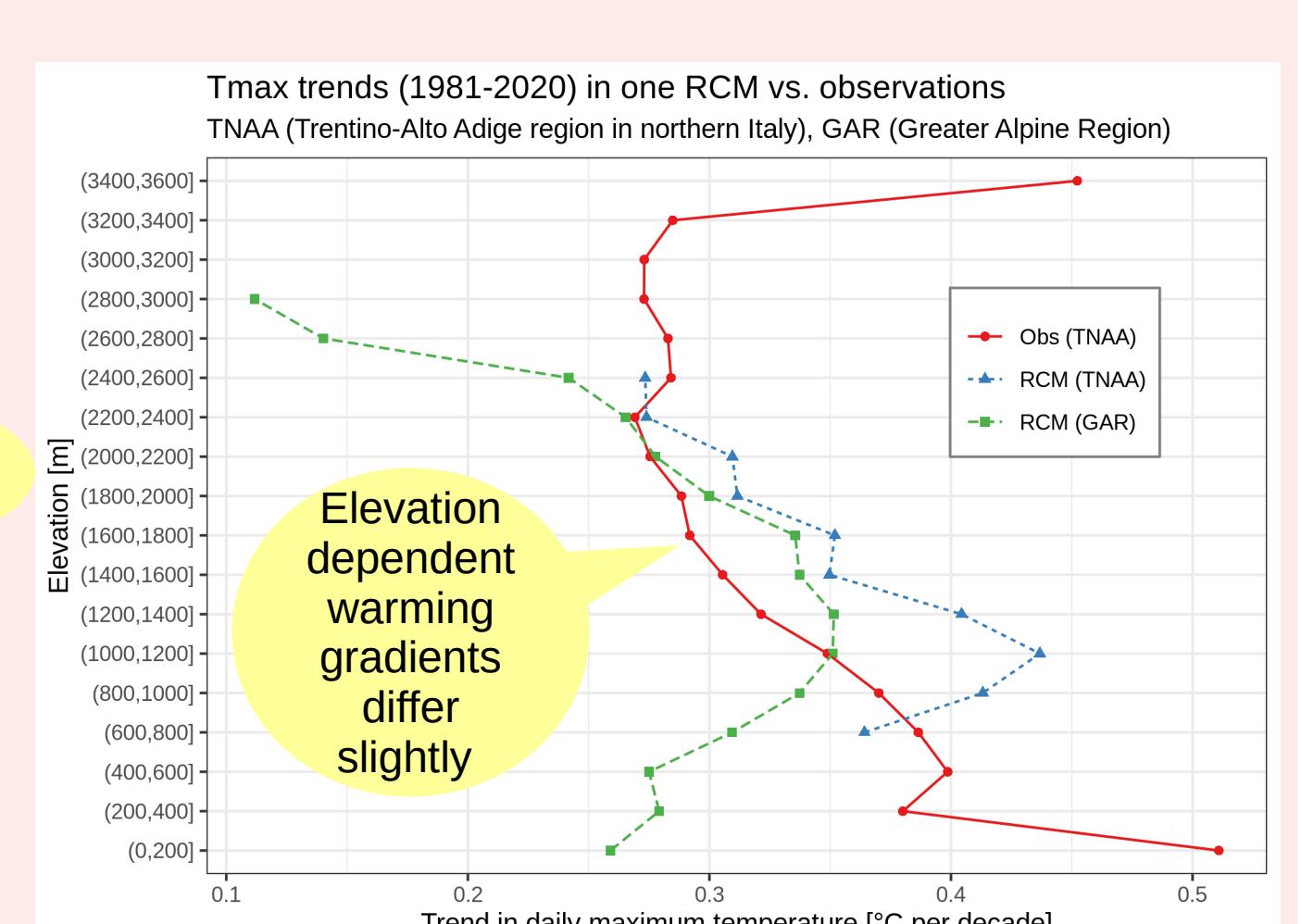
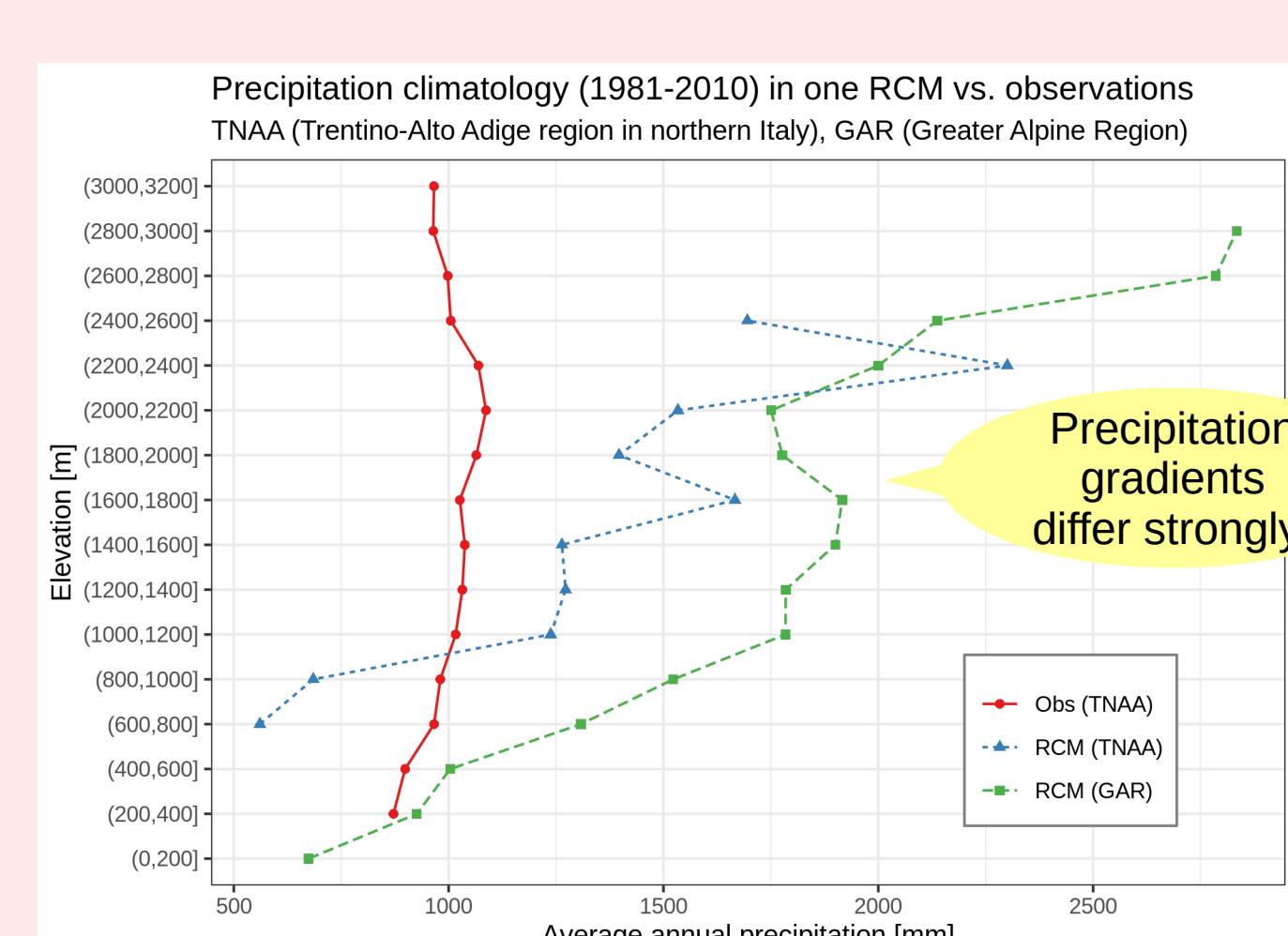
- Collaboration between governmental body and research institution
- Scientific support to the Strategy for Mitigation and Adaptation to Climate Changes of the Autonomous Province of Trento in Italy

#### Scientific questions:

- How well do regional climate models represent meteorology and climate in complex terrain?
- When and how to perform bias adjustment and downscaling?
- What are the implications for climate change assessments?
- Implication for impact models, such as snow hydrology?

#### Aims

- Overview of climate change impacts
- Provision of reference climate scenarios for climate change assessment and impact models



same overall range