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Comparing diversity: Communicating CMIP3 and CMIP5 results

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Many users and stakeholders are already familiar with climate simulation results and understand climate projections, e.g. as provided by the IPCC. However, these users and stakeholders are typically no climate – and in particular no climate modeling – experts. With the new RCP scenarios and the new generation of GCMs used in CMIP5, new results have come up – some of them surprising. In some regions (e.g. Central Europe), climate change signals simulated with the strong forcing scenario RCP8.5 are not so much stronger than signals simulated with the previous generation of GCMs under the moderate emissions scenario SRES A1B. Understandably, questions by the users arise.

We need to explain the differences between the two ensembles: different scenarios, new generation of GCMs, partly higher resolution simulations, partly new GCMs (and additionally new generations of dynamical and statistical downscaling models). This is not trivial, since no systematic stepwise comparison between older and newer model generations and between the scenarios are easily available. Nevertheless, the users need guidance through these warrens to help them make the best use of the available climate projections.

The presentation will show examples of this analysis and communication from the project ReKliEs-De.