



Statistical Regionalization Models Intercomparisons and hydrological impacts Project (StaRMIP) : First Results

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Statistical downscaling models (SDM) appear now as complementary to dynamical downscaling. Most state-of-the-art SDMs can be classified into the four following (sometimes overlapping) approaches : Transfert Functions, Weather Typing, Stochastic Weather Generator and Bias Correction. Here, we aim to perform an Intercomparison exercise of several SDMs of Precipitation at high resolution. Those are tested with selected predictors from ERA-Interim reanalysis data over the EURO-CORDEX domain. The SDMs intercomparison is performed via a cross-validation over the last 30 years. In this work, we focus on relevant indicators to assess the quality of the simulations compared to observations in terms of spatial, temporal and extremes properties. These indicators will allow us to characterize uncertainties associated to the different simulations and point out their main weaknesses. Hence, this work will further help us to target the needed improvements of the existing models as well as provide statistically simulated time series to be compared to RCM outputs in the MED- and EURO-CORDEX framework. This work stands within the French ANR project “Statistical Regionalization Models Intercomparisons and hydrological impacts Project” (StaRMIP, 2013-2016).