



From climate model ensembles to statistics: Introducing the "wux" package

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We present the R package "wux", a toolbox to analyze climate change uncertainties projected by numerical climate model simulations.

The focus of this package is to automatically process big amounts of climate simulations from multi-model ensembles in a user-friendly way. For that, climate model output in binary NetCDF format is read in and stored in a data frame, after first being aggregated to a desired temporal resolution and then being averaged over spatial domains of interest. The data processing can be performed for any number of meteorological parameters at one go, which allows multivariate statistical analysis of the climate model ensemble. The data to be processed is not restricted to any specific type of climate simulation: Global circulation models (GCMs), as the CMIP5 or CMIP3 simulations, can be read in the same way as Regional Climate Models (RCMs), as e.g. the CORDEX or ENSEMBLES simulations.