

Overview of the `ecomSUDG.Raccess` package

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Since the [R](#) language has been adopted for some key tasks in the EUPORIAS and SPECS projects (including the development of comprehensive validation and statistical-downscaling packages), the `ecomSUDG.Raccess` is envisaged as a user-friendly, R-based interface to the ECOMS User Data Gateway, enabling [authentication](#) and remote access to the different datasets (seasonal forecasting, observations, reanalysis) currently available. Moreover, `ecomSUDG.Raccess` implements data homogeneization (a single vocabulary) and time filtering/aggregation functionality.

The `ecomSUDG.Raccess` package relies on the `rJava` package as an interface to the powerful capabilities of the [Unidata's netCDF Java library](#).

The following panels show an illustrative use of ECOMS-UDG to obtain the minimum DJF temperature DJF bias for System4 hindcast (one-month lead time) over Europe. WFDEI is used as reference.

R code	Output
<pre>obs <- loadECOMS(dataset = "WFDEI", var = "tasmin", season = c(12,1,2)) prd <- loadECOMS(dataset = "CFSv2_seasonal", var = "tasmin", season = c(12,1,2), members = 1:2, leadMonth = 1)</pre>	
<pre>obsr <- interpGridData(gridData = obs, new.grid = getGrid(prd), method = "bilinear") bias <- getBias(obsr,prd) plotMeanField(bias, multi.member = TRUE)</pre>	