simass.txt

This is a file with simulation assessment, summarising performance criteria over model domain. The file is located in the resultdir folder. The file contains values of most performance criteria of the selected variables in the objective function. Note: If several RA criteria have been selected, only the last of them will be printed to file. Not calculated criterion are indicated by -9999. All information from the simass-files can also be found in the hyss_yymmddHHMM.log.

When ensemble or sequence simulations are made, the results from simulations (I=1 .. *n* or I=sequence number>0) are written to files named simassX_00I.txt. For a Monte Carlo calibration *n* is defined by `num_ens` in optpar.txt. For a DE calibration *n* is `num_ngen` plus one, where the first one is a simulation with average of the others parameter values.

For the calculation of criterion for lake water stage, the combination of variables `wcom` and `wstr` are exchanged for the internal variables `clwc` and `clws` by the program. These variables are the water stages cleaned from `w0ref` reference level (`clwc=wcom-w0ref`, `clws=wstr-w0ref`). This makes the criterion calculation more accurate, but note that relative criteria, e.g. relative bias, are relative to the smaller cleaned water stage level.

The following performance criteria may be calculated: Code is corresponding code for info.txt. Definitions of equations for calculating the criteria is found here.

Criterion	Code	Description
`Regional NSE`	RR2	regional Nash-Sutcliffe efficiency (all data combined in one long time-series)
`Regional RA`	RRA	regional Nash-Sutcliffe efficiency like criteria where the square is exchanged with a coefficient value
`Regional RE`	RRE	regional relative bias (all data combined in one long time-series)
`Regional MAE`	-	regional absolute error (all data combined in one long time-series)
`Average NSE`	MR2	average of Nash-Sutcliffe efficiencies for all subbasins with observations
`Average RA`	MRA	average value of subbasin values of Nash-Sutcliffe like criteria where the square is exchanged with a coefficient value
`Average RE`	MRE	average of the relative bias for all subbasins (Note: fraction, not %)
`Average RSDE`	MRS	error in standard deviation, average of all subbasins with observations
`Average CC`	MCC	Pearson correlation coefficient, average of all subbasins with observations
`Average ARE`	MAR	mean absolute of relative errors for all subbasins (Note: fraction, not %)
`Spatial NSE`	SR2	spatial R2 calculated using annual means for all subbasins (requires at least 5 years and 5 subbasins with data)
`Spatial RA`	RRA	Spatial Nash-Sutcliffe like criteria where the square in the Nash-Sutcliffe formula is exchanged for a coefficient value
`Spatial RE`	-	spatial relative error calculated using annual means for all subbasins (requires at least 5 years and 5 subbasins with data)
`Kendalls Tau`	TAU	average of Kendall's Tau value for all subbasins
`Median NSE`	MD2	median of Nash-Sutcliffe efficiency for all subbasins with observations

Criterion	Code	Description
Median RA	MDA	median of all subbasins RA (Nash-Sutcliffe like criteria where the square is exchanged with a coefficient value)
Median KGE	MKG	median of all subbasins Kling-Gupta efficiency
Median NRMSE	MNR	median of all subbasins normalised RMSE
Mean NSEW	MNW	average of Nash-Sutcliffe efficiencies adjusted for bias for all subbasins with observations
Number of data for regional criterion	-	number of data points included in calculation of regional criteria
Number of areas in mean/median criterion	-	number of areas (subbasins/outregions) which criteria is included in mean and median criteria calculations