subassX.txt

This is a file with an assessment of each subbasin's performance, or each output region if regional output variables are used. The file is located in the resultdir folder. One file is printed for each performance criterion included in the objective function given in info.txt. X is the ordinal number of the performance criterion and the subbasin assessment is calculated for the same variables as that performace criterion. If more than nine criteria are included, the following are denoted by capital letters. Definitions of equations for calculating the criteria is found here.

When ensemble or sequence simulations are made, the results from simulations (I=1 .. *n* or I=sequence number>0) are written to files named subassX_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 median 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 first row of the file let you know the average period (0=timesteply, 1=daily, 2=weekly, 3=monthly, 4=yearly) used for calculation of the values that are compared in the criteria. This period corresponds to the setting `meanperiod` in info.txt. Variable names and unit are also listed on row one. The second row is column headings. Thereafter follow subbasins which has observations, one on each row. The data limitation for calculating the subbasin criteria is the same as that of the calibration criteria. Missing values are indicated as -9999.

The columns of subassX.txt:

Header	Unit	Description
SUBID / OUTREGID	-	subbasin id (as defined in GeoData.txt) or outregion id (as defined in Outregions.txt)
NSE	-	Nash-Sutcliffe efficiency
CC	-	Pearson correlation coefficient (part 1 of Kling-Gupta efficiency)
RE(%)	%	relative bias in mean
RSDE(%)	%	relative bias in standard deviation
Sim	*in first row*	mean of simulated variable
Rec	*in first row*	mean of observed variable
SDSim	*in first row*	standard deviation of simulated variable
SDRec	*in first row*	standard deviation of observed variable
MAE	*in first row*	mean absolute error
RMSE	*in first row*	root mean square error
Bias	*in first row*	bias
SDE	*in first row*	bias of standard deviation
KGE	-	Kling-Gupta efficiency
KGESD	-	part 2 of Kling-Gupta efficiency (std-quotient)
KGEM	-	part 3 of Kling-Gupta efficiency (mean-quotient)
NRMSE	*in first row*	normalised root mean square error

Header	Unit	Description
NSEW	-	Nash-Sutcliffe efficiency adjusted for bias

Example of subass1.txt:

```
 Subbasin assessment. Criteria is calculated for period 1. Variables: rout,
cout  Unit: m3/s
SUBID   NSE    CC     RE(%)    RSDE(%)   Sim    Rec     SDSim    SDRec    MAE
RMSE    Bias    SDE    KGE     KGESD    KGEM    NRMSE    NSEW
112 0.507    0.721    22.649    -68.38    0.058    0.047    0.068    0.1
0.038    0.07    0.011    -0.032    0.518    0.678    1.226    0.066    0.512
135 0.722    0.881    -20.802    0.398    0.308    0.389    0.409    0.407
0.146    0.214    -0.081    0.002    0.76    1.004    0.792    0.075    0.722
```