9.2.5 Applying monthly scenario grids

When WaSiM-ETH is driven by results of GCM´s which are interpolated using bilinear interpolation it may be advantagable to consider known small scale variability by scaling the interpolation results by a spatially varying factor. Thus, the known variability of e.g. monthly rainfall, or sunshine duration, or radiation a.s.o. can be layed over the rather smooth interpolation results. Since there was already a possibility in WaSiM-ETH to scale the interpolation results by monthly scenarios for given locations, and since the consideration of scaling grids can be seen as a more detailed way of applying scenarios, the declaration of scenario grids is consequently done in the control file sections for interpolating meteorological data:

```
[temperature]
…
$IDWweight     # weighting of the reciprocal distance for IDW
0.1               # for method 3: relative weight of IDW-on the result
$IDWmaxdist    # max. distance of stations to the actual interpolation cell
$Anisoslope    # slope of main axis of the anisotropy-ellipse…
$Anisotropie   # axis ratio of the anisotropy-ellipse
-40                    # lower limit of interpolation results
-40                    # replace value for results below the lower limit
40                     # upper limit for interpolation results
40                     # replace value for results above the upper limit
1                      # 1=use scenario data, 0=dont use scenarios
5         # 1=add, 2=multiply, 3=percentual change, 5=monthly scaling grids
$inpath//scalegrd.01  # scaling grid for small scale variability month 1
$inpath//scalegrd.02  # scaling grid for small scale variability month 2
$inpath//scalegrd.03  # scaling grid for small scale variability month 3
$inpath//scalegrd.04  # scaling grid for small scale variability month 4
$inpath//scalegrd.05  # scaling grid for small scale variability month 5
$inpath//scalegrd.06  # scaling grid for small scale variability month 6
$inpath//scalegrd.07  # scaling grid for small scale variability month 7
$inpath//scalegrd.08  # scaling grid for small scale variability month 8
$inpath//scalegrd.09  # scaling grid for small scale variability month 9
$inpath//scalegrd.10  # scaling grid for small scale variability month 10
$inpath//scalegrd.11  # scaling grid for small scale variability month 11
$inpath//scalegrd.12  # scaling grid for small scale variability month 12
0                       # number of scenario cells
```

For each month, a scaling grid has to be specified. The grids are sequentially read in duringthe model run each time when a new month starts. Until now, there is no temporal interpolation between different grids respectively between different months, so abrupt changes in the scenario grid will cause also abrupt changes in the temporal course of the scaled interpolation results.