

## **SWAT-G, A MODIFIED VERSION OF THE DISTRIBUTED MODEL SWAT**

K. Eckhardt, N. Fohrer, H.-G. Frede

Department of Agricultural Ecology and Natural Resources Management

Justus-Liebig-University, Giessen

Klaus.Eckhardt@agrar.uni-giessen.de

The Soil and Water Assessment Tool (SWAT; Arnold et al., 1998) is a well established distributed ecohydrologic model. The objective in model development was to predict the impact of management on water, sediment and agricultural chemical yields in meso- to macroscale basins. Exemplified on a mesoscale catchment in Germany it is shown that SWAT99.2 and older versions of the model are not able to correctly reproduce the runoff generation in low mountains regions though. Alternatively, the modified version SWAT-G (Eckhardt et al., 2000) can be used which, as it is demonstrated, shows a far better performance where steep slopes and shallow soils over hard rock aquifers predominate. SWAT-G includes modifications concerning the surface and sub-surface runoff generation, the calculation of the evapotranspiration, the simulation of crop growth and crop rotation, and a new option for the control of reservoirs.