



## **Effects of data aggregation with regard to parameterisation of distributed, regional scale hydrological models**

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Distributed, regional scale modelling requires the use different standard data sets such as digital elevation model, soil information and land use. Application of process based models across scales often requires the use of aggregated data sets or data sets of increased scale with reduced information content. Mostly these available spatial data sets are also used for model parameterisation. E.g. using pedotransfer functions or tabular values digital soil maps therefore are translated into spatially distributed fields of model parameters. In the framework of the EHMLUC initiative(ensemble hydrological modelling of land use change) the distributed and process based TOPLATS model is applied to the Dill catchment (693 km<sup>2</sup>) in central Germany. The detailed data base (all spatial data sets are available in 25m resolution) is aggregated step-wise to systematically investigate the effects of data aggregation on the simulated catchment water fluxes. This investigation reveals the effect of data aggregation on the simulation results via the use of aggregated data for model parameterisation. The main aim of this presentation is to provide an overview about the necessity of spatial resolution for different input data of spatial distributed hydrological models against the background of using these data for model parameterisation.