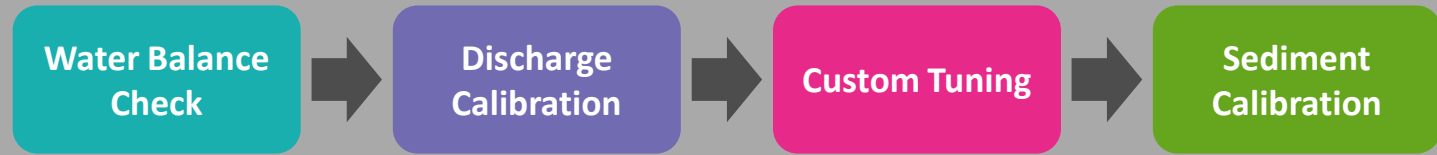


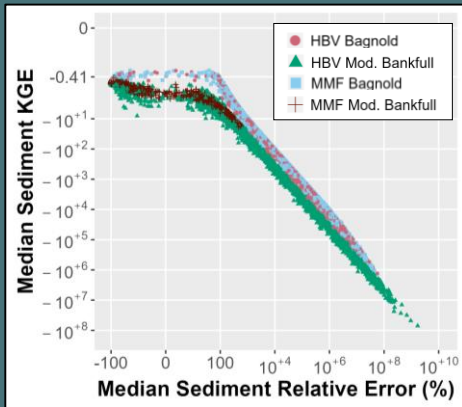
# What limits model performance in the multi-objective calibration of a pan-European hydrological model for discharge & sediments?

## CALIBRATION PROCESS



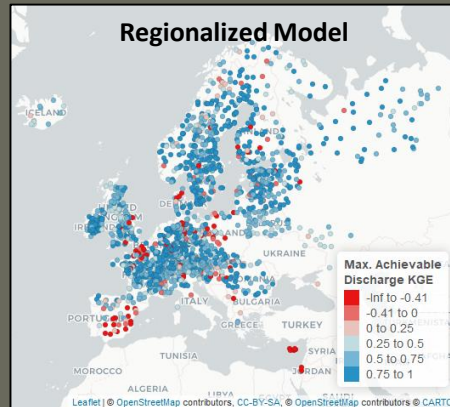
The semi-distributed E-HYPE4 Hydrological Predictions for the Environment (HYPE) model was calibrated within a framework which allowed for evaluation of the factors limiting model performance.

### MODEL STRUCTURE



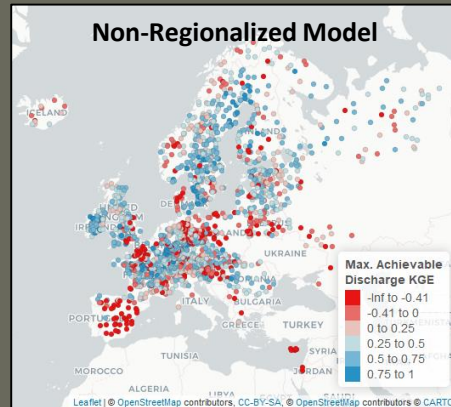
Similar performance from both simple & complex erosion routines

### MODEL PARAMETERIZATION

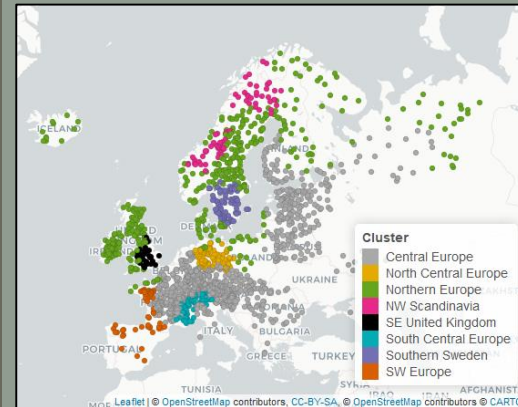


Maximum achievable model performance was greatest with a highly regionalized model

### Non-Regionalized Model



### MODEL PROCESSES



Dominant processes affecting model biases varied for different regions

Conrad Brendel, René Capell, Alena Bartosova (2023)