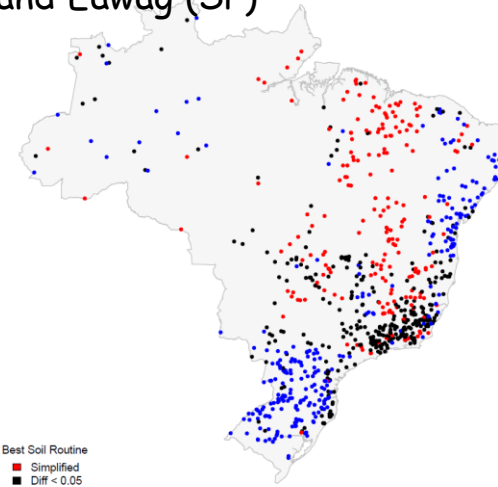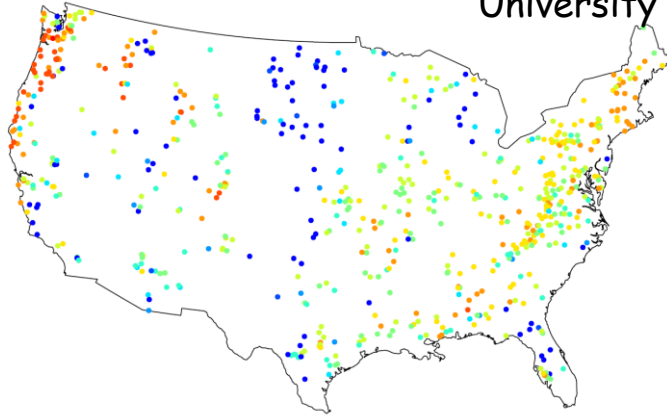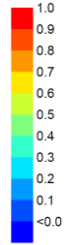# A few hundred catchments later – lessons from modelling large samples of catchments around the globe

Jan Seibert, Marc Vis, Sandra Pool
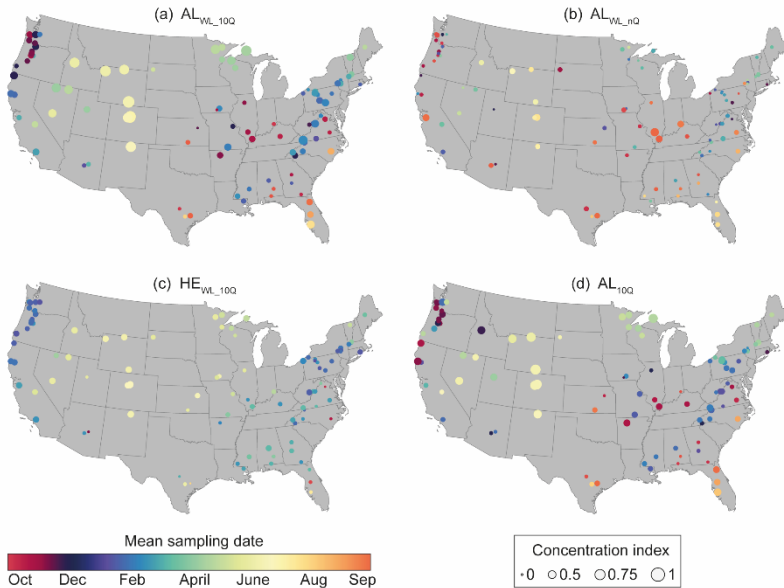University of Zurich (JS&MV) and Eawag (SP)

Blue: Normal soil routine better
Red: Simplified soil routine better
Black: No difference

Best Soil Routine
- Simplified
- Diff < 0.05
- Normal

Performance of an uncalibrated bucket type model (NSE)

Seibert J, Vis MJP, Lewis E, van Meerveld HJ, 2018. Upper and lower benchmarks in hydrological modelling. Hydrological Processes. ;1–6. Doi: 10.1002/hyp.11476
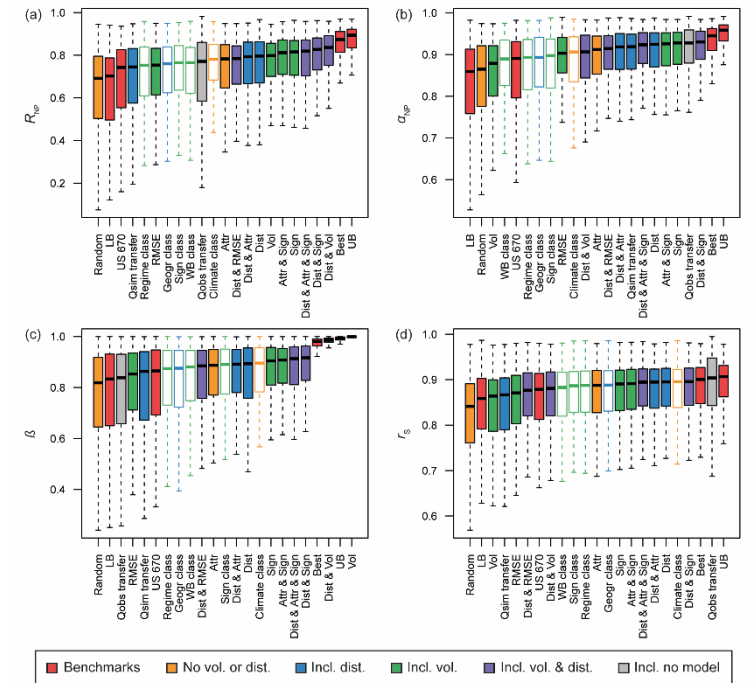

(a) AL_{WL_10Q}   (b) AL_{WL_nQ}

(c) HE_{WL_10Q}   (d) AL_{10Q}

Mean sampling date
Oct   Dec   Feb   April   June   Aug   Sep

Concentration index
0   0.5   0.75   1

Seasonal distribution of most informative point discharge observations

Pool, S. & Seibert, J., 2021. Gauging ungauged catchments – Active learning for the timing of point discharge observations in combination with continuous water level measurements, Journal of Hydrology,
Video-version: https://tube.switch.ch/videos/ul1E8QRjAr

Regionalisation of model parameter valuesfor the CAMELS-US catchments
Pool et al., in review

Benchmarks | No vol. or dist. | Incl. dist. | Incl. vol. | Incl. vol. & dist. | Incl. no model