

DIRT-X: Evaluating sediment Delivery Impacts on Reservoirs in changing climate and society aCROSS scales and sectors

Publications

Bartosova, A., Arheimer, B., de Lavenne, A., Capell, R., Strömqvist, J., 2021. Large-Scale Hydrological and Sediment Modelling in Nested Domains under Current and Changing Climate. *Journal of Hydrologic Engineering* 26(5), ISSN 1084-0699.

<https://ascelibrary.org/doi/full/10.1061/%28ASCE%29HE.1943-5584.0002078>

Mouris, K., Schwindt, S., Haun, S., Oreamuno, M.F.M., Wieprecht, S., 2022. Introducing seasonal snow memory into the RUSLE. *J Soils Sediments* 22, 1609–1628.

<https://doi.org/10.1007/s11368-022-03192-1>

Balouchi B., Shafai Bajestan M., Ruther N., Rahmanshahi M. 2022. Experimental investigation of flow pattern over a fully developed bed at a 60° river confluence. *J. of Acta Geophysica*, 70, 2283–2296.

Mouris, K, Acuna Espinoza, E, Schwindt, S. et al., 2023. Stability criteria for Bayesian calibration of reservoir sedimentation models. *Model. Earth Syst. Environ.*

<https://doi.org/10.1007/s40808-023-01712-7>

Pesci, M.H., Mouris, K., Haun, S., Förster, K., 2023. Assessment of uncertainties in a complex modeling chain for predicting reservoir sedimentation under changing climate. *Model. Earth Syst. Environ.* <https://doi.org/10.1007/s40808-023-01705-6>

Hu, J., Koning, V., Bosshard, T., Harmsen, R., Crijns - Graus, W., Worrell, E., & van den Broek, M. (2023). Implications of a Paris-proof Scenario for Future Supply of Weather-dependent Variable Renewable Energy in Europe. *Advances in Applied Energy*. <https://doi.org/10.1016/j.adapen.2023.100134>

Brendel C., Capell R., and Bartosova A., 2023. To Tame a Land: Limiting factors in model performance for the multi-objective calibration of a pan-European, semi-distributed hydrological model for discharge and sediments. *Journal of Hydrology: Regional Studies* (in review)



Pesci, M.H., Schulte Overberg, P., Bosshard, T., and Förster, K. 2023. From global glacier modeling to catchment hydrology: bridging the gap with the WaSiM-OGGM coupling scheme. *Frontiers in Water* (in review)

Frasnelli T., Pesci, M. , Förster, K., Schöber, J. and Achleitner S. (2023-ip). Long term modelling of suspended sediments in alpine catchments under climate change impacts. *Journal of Hydrology* (in preparation)

Frasnelli T., Schöber, J. and Achleitner S. (2023-ip). Data driven modelling of sediment transport – triggering drivers in alpine catchments (in preparation)

Open-access data files

Pesci, M.H., 2023. WaSiM-OGGM: v1.0.1. Open source software (coupling scheme WaSiM and OGGM). <https://doi.org/10.5281/ZENODO.8315508>

Capell, Rene, & Brendel, Conrad. (2023). HYPEtools: Tools for Processing and Analyzing Files from the Hydrological Catchment Model HYPE.. Zenodo <https://doi.org/10.5281/zenodo.8279513>

Lindström, G., Pers, C.P., Rosberg, R., Strömqvist, J., and Arheimer, B. (2010): Development and test of the HYPE (Hydrological Predictions for the Environment) model – A water quality model for different spatial scales. *Hydrology Research* 41.3-4:295-319.

SMHI, 2023. Climate Impacts on European Reservoirs, HYPE Web Showcase. (<https://hypewebapp.smhi.se/hypeweb-results/> Accessed June 30, 2023)

