

Scientific Publications

Five most cited Articles, according to Web of Science (March 2022):

Hrachowitz, M. et al. 2013. A decade of Predictions in Ungauged Basins (PUB) - a review. *Hydrological Sciences Journal*, 58(6):1198-1255, DOI:10.1080/02626667.2013.803183 **No citations: 632**

Verthoeven, J.T.A., Arheimer, B., Yin, C., Hefting, M.M. 2006. Regional and global concerns over wetlands and water quality. *Trends in Ecology and Evolution* 21(2):96-103. **No citations: 517**

Montanari, A. et al. 2013. "Panta Rhei – Everything Flows": Change in hydrology and society – The IAHS Scientific Decade 2013-2022. *Hydrological Sciences Journal*, 58(6):1256-1275, doi:10.1080/02626667.2013.809088. **No citations: 468**

Blöschl, G., Hall, J., Parajka, J., Perdigão, R.A.P., Merz, B., Arheimer, B. et al. 2017. Changing climate shifts timing of European floods. *Science* 357(6351):588-590, doi: 10.1126/science.aan2506. <http://science.sciencemag.org/content/357/6351/588> **No citations: 430**

Blöschl, G., Hall, J., Viglione, A., Perdigão, R.A.P., Parajka, J., Merz, B., Lun, D. Arheimer, B., et al. 2019. Changing climate both increases and decreases European river floods. *Nature* 573:108–111. <https://doi.org/10.1038/s41586-019-1495-6> **No citations: 417**

Journal Articles (peer-reviewed)

1. Cudennec, C., Lins, H., Uhlenbrook, S., Amani, A., and Arheimer, B., 2022. Editorial - Operational, epistemic and ethical value chaining of hydrological data to knowledge and services: a watershed moment. *Hydr. Sciences Journal* 67(16): 2363-2368. DOI: 10.1080/02626667.2022.2150380
2. de Lavenne, A., Lindstrom, G., Stromqvist, J., Pers, C., Bartosova, A., and Arheimer, B., 2022. Evaluation of overland flow modelling hypotheses with a multi-objective calibration using discharge and sediment data. *Hydr. Processes* 36(12): e14767, DOI: 10.1002/hyp.14767
3. de Lavenne, A., Andréassian, V., Crochemore, L., Lindström, G., and Arheimer, B., 2022: Quantifying multi-year hydrological memory with Catchment Forgetting Curves, *Hydrol. Earth Syst. Sci.*, 26, 2715–2732, <https://doi.org/10.5194/hess-26-2715-2022>.
4. Santos, L., Andersson, J.C.M. and Arheimer, B., 2022. Evaluation of parameter sensitivity of a rainfall-runoff model over a global catchment set, *Hydrological Sciences Journal*, 67:3, 342-357, DOI: 10.1080/02626667.2022.2035388. <https://doi.org/10.1080/02626667.2022.2035388>
5. Arciniega-Esparza, S., Birkel, C., Chavarría-Palma, A., Arheimer, B., and Breña-Naranjo, J. A., 2022. Remote sensing-aided rainfall–runoff modeling in the tropics of Costa Rica, *Hydrol. Earth Syst. Sci.*, 26, 975–999, <https://doi.org/10.5194/hess-26-975-2022>.
6. Capell, R., Bartosova, A., Tonderski, K., Arheimer, B., Pedersen, S.M., Zilans, A., 2021. From local measures to regional impacts: Modelling changes in nutrient loads to the Baltic Sea. *Journal of Hydrology: Regional Studies* 36, 100867. <https://doi.org/10.1016/j.ejrh.2021.100867>
7. Bartosova, A., Arheimer, B., de Lavenne, A., Capell, R. and Strömqvist, J. 2021. Large-Scale Hydrological and Sediment Modeling in Nested Domains under Current and Changing Climate. *Journal of Hydrologic Engineering*, Vol. 26, Issue 5 (May 2021) [https://doi.org/10.1061/\(ASCE\)HE.1943-5584.0002078](https://doi.org/10.1061/(ASCE)HE.1943-5584.0002078)
8. Pimentel, R. and Arheimer, B., 2021. Hydrological impacts of a wildfire in a Boreal region: The Västmanland fire 2014 (Sweden). *Science of The Total Environment* 756:143519. <https://doi.org/10.1016/j.scitotenv.2020.143519>
9. Photiadou, C., Arheimer, B., Bosshard, T., Capell, R., Elenius, M., Gallo, I., Gyllensvärd, F., Klehmet, K., Little, L., Ribeiro, I., Santos, L. and Sjökvist, E. 2021. Designing a climate service

- for planning climate actions in vulnerable countries. *Atmosphere* 12:121.
<https://doi.org/10.3390/atmos12010121>
10. Merks, J., Photiadou, C., Ludwig, F. and Arheimer, B., 2020. Comparison of open access global climate services for hydrological data, *Hydrological Sciences Journal*, DOI: 10.1080/02626667.2020.1820012. <https://doi.org/10.1080/02626667.2020.1820012>
 11. Hundecha, Y., Arheimer, B., Berg, P., Capell, R., Musuuza, J., Pechlivanidis, I. and Photiadou, C. 2020. Effect of model calibration strategy on climate projections of hydrological indicators at a continental scale. *Climatic Change* 163:1287–1306. <https://doi.org/10.1007/s10584-020-02874-4>
 12. Du, T.L.T., Lee, H., Bui, D.D., Arheimer, B., Li, H-Y., Olsson, J., Darby, S.E., Sheffield, J., Kim, D., and Hwang, E. 2020. Streamflow prediction in “geopolitically ungauged” basins using satellite observations and regionalization at subcontinental scale. *Journal of Hydrology*, ISSN: 0022-1694, Vol: 588, Page: 125016. <https://doi.org/10.1016/j.jhydrol.2020.125016>
 13. Stadnyk, T.A., MacDonald, M.K., Tefs, A., Dery, S.J., Koenig, K., Gustafsson, D., Isberg, K., Arheimer, B., 2020. Hydrological modeling of freshwater discharge into Hudson Bay using HYPE. *Elementa-science of the Anthropocene* 8:43. <https://doi.org/10.1525/elementa.439>
 14. Cudennec, C., Lins, H., Uhlenbrook, S. and Arheimer, B., 2020. Editorial – Towards FAIR and SQUARE hydrological data, *Hydrological Sciences Journal*, 65:5, 681-682, DOI: 10.1080/02626667.2020.1739397
 15. Arheimer, B., Pimentel, R., Isberg, K., Crochemore, L., Andersson, J. C. M., Hasan, A., and Pineda, L., 2020. Global catchment modelling using World-Wide HYPE (WWH), open data and stepwise parameter estimation, *Hydrol. Earth Syst. Sci.* 24, 535–559, <https://doi.org/10.5194/hess-24-535-2020>
 16. Arheimer, B. and Lindström, G. 2019. Detecting changes in river flow caused by wildfires, storms, urbanization, regulation, and climate across Sweden. *Water Resources Research*, 55. <https://doi.org/10.1029/2019WR024759>
 17. Crochemore, L., Isberg, K., Pimentel, R., Pineda, L., Hasan, A. and Arheimer, B. 2019. Lessons learnt from checking the quality of openly accessible river flow data worldwide, *Hydrological Sciences Journal*, DOI: 10.1080/02626667.2019.1659509
 18. Blöschl, G., Hall, J., Viglione, A., Perdigão, R.A.P., Parajka, J., Merz, B., Lun, D. Arheimer, B., et al. 2019. Changing climate both increases and decreases European river floods. *Nature* 573:108–111. <https://doi.org/10.1038/s41586-019-1495-6>
 19. Bartosova, A., Capell, R., Olesen, J. E., Jabloun, M., Refsgaard, J. C., Donnelly, C., . . . Arheimer, B. 2019. Future socioeconomic conditions may have a larger impact than climate change on nutrient loads to the Baltic Sea. *Ambio*, 48(11), 1325-1336. DOI: <https://doi.org/10.1007/s13280-019-01243-5>
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 21. Weichselgartner J. and Arheimer B., 2019. Evolving climate services into knowledge-action systems. *Weather, Climate, and Society* 11 (2): 385-399. <https://journals.ametsoc.org/doi/full/10.1175/WCAS-D-18-0087.1>
 22. Bloeschl, G., Bierkens, M. F. P., Chambel, A., Cudennec, C., Destouni, G., Fiori, A., . . . Zhang, Y. 2019. Twenty-three unsolved problems in hydrology (UPH) - a community perspective. *Hydrological Sciences Journal*, 64(10), 1141-1158. <https://doi.org/10.1080/02626667.2019.1620507>

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Web products

Open Data

<http://hypeweb.smhi.se>

<http://vattenwebb.smhi.se>

Climate Service

<http://swicca.climate.copernicus.eu/>

Open Source code

<http://hypecode.smhi.se/>

Hydrological Research at SMHI

www.smhi.se/hydrology-research

Film (for flat screen and dome projection)

<http://www.smhi.se/en/research/research-departments/hydrology/urban-water-vision-eng-1.22093>

YouTube videos

Open science: <https://www.youtube.com/watch?v=KsV7v44T2oY&t=43s>

Open Innovations: <https://www.youtube.com/watch?v=CVoTSPFDLFA&feature=youtu.be>

Open to the world: <https://www.youtube.com/watch?v=-RTEYKrdXf0&t=56s>

Virtual water-Science Laboratory

<http://www.switch-on-vwsl.eu/>