



Water and Development Research Group

WDRG is a multi- and interdisciplinary research group, working rigorously on various aspects of water. Our research themes vary from “water for food” to the “role of power and politics in water management”. WDRG has a strong modeling knowledge on big data and spatial analysis from local to global scale.

Publications

- Heino, M. et al. (2023). [Increased probability of hot and dry weather extremes during the growing season threatens global crop yields](#). Scientific Reports, 13(1), 3583.
- Zhao, D. et al. (2023). Delivery of energy sustainability: [Applications of the “STAR” protocol to the Sustainable Development Goal 7 index and its interaction analysis](#). Journal of Cleaner Production, 135884.
- Mancheva, I. et al. (2023). [Institutional accountability: the differentiated implementation of collaborative governance in two EU states](#). West European Politics, 1-26.
- Wassénus, E. et al. (2023). [A global analysis of potential self-sufficiency and diversity displays diverse supply risks](#). Global Food Security, 37, 100673.
- Peng, X. et al. (2023). [Water-saving co-benefits of CO2 reduction in China’s electricity sector](#). Iscience, 26(2).
- Sarkki, S. et al. (2023). [“Rights for Life” scenario to reach biodiversity targets and social equity for indigenous peoples and local communities](#). Biological Conservation, 280, 109958.
- Laurila-Pant, M. et al. (2023). [A protocol for analysing the role of shared situational awareness and decision-making in cooperative disaster simulations](#). International Journal of Disaster Risk Reduction, 103544.
- Yu, F. et al. (2023). [Driving forces and variation in water footprint before and after the COVID-19 lockdown in Fujian Province, China](#). Journal of Cleaner Production, 136696.

People

[Anup Shrestha](#), a new PhD researcher, is working on flood impact modelling and management under the supervision of Distinguished Professor Olli Varis. He is interested in disaster risk management and physics based flood modelling approaches in data scarce regions.



[Qing Xia](#), a visiting doctoral student from Hohai University, is focusing her research on input-output analysis under the supervision of Distinguished prof. Olli Varis. She is mainly interested in virtual water, water footprint, environmental input-output analysis, and sustainable development of basins.

Awards

[Our research group members received thesis and publication awards from Aalto University School of Engineering](#): Post-doctoral researcher [Vilma Sandström](#) got Publication Award 2022, post-doctoral researcher [Matias Heino](#) got Doctoral Dissertation Award 2022 and master's student alumni [Aino Ahvo](#) got Master's Thesis Award 2022.

News

Our associate professor [Marko Keskinen](#), attended UN 2023 Water Conference in New York as a part of Finland's delegation. Marko contributed to the events related to Interactive Dialogue 4 on transboundary water cooperation. A related news story by Yle (in Finnish) can be found [here](#).



Funding

Our post-doc researcher [Dandan Zhao](#) achieved the Cooperation Initiative Funding with Technical University of Munich (TUM). The research topic is "Towards sustainable human-nature interactions: Maximizing synergies and leveraging trade-offs through Nexus framework".

Latest blog posts

- [Climate-driven crop migration – an ongoing process](#)

Next newsletter in July!