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Dear Editor in chief,

May 6, 2023

I hope this letter finds you well. I am pleased to submit our manuscript entitled "Quantifying the Net Effects of Institutional Shifts on Water Governance in the Yellow River Basin: A Socio-Hydrological Analysis" for consideration for publication in the Journal of Hydrology's special issue on Grounded Sociohydrology.

In our study, we present a comprehensive analysis of the impacts of two major institutional shifts, the 1987 Water Allocation Scheme (87-WAS) and the 1998 Unified Basin Regulation (98-UBR), on water governance in the Yellow River Basin (YRB). We employed a Differenced Synthetic Control method to quantify the net effects of these shifts on water use and investigated the reasons for their success or failure. Our research aligns with the special issue's principles by grounding our socio-hydrological study in real-world cases and fostering methodological symmetry between hydrological and social frameworks.

The special issue on Grounded Sociohydrology provides an excellent platform for our manuscript, as it emphasizes the importance of interdisciplinary approaches and engagement with stakeholders in understanding water flows, uses, and management. We believe that our manuscript would be of interest to the journal's readership and contribute to the understanding of water governance challenges and the role of institutions in the management of social-ecological systems.

We kindly suggest the following experts as potential reviewers for our manuscript:

- o Fuqiang Tian, Tsinghua University, tianfq@tsinghua.edu.cn
- o Jianghao Wang, University of Chinese Academy of Sciences, wangjh@lreis.ac.cn
- o Giuliano Di Baldassarre, Uppsala University, Giuliano.Dibaldassarre@geo.uu.se
- Heidi Kreibich, GeoForschungsZentrum Potsdam, heidi.kreibich@gfz-potsdam.de
- o Britta Höllermann, University of Osnabrück, britta.hoellermann@uni-osnabrueck.de

Please find the manuscript attached, and we look forward to your consideration. We are more than happy to make any necessary revisions as per the reviewers' suggestions. The manuscript includes 1 text (5640 words), 4 figures, 1 supplementary material (appendix with three sections). We have no conflicts of interest to disclose.

Thank you for your time and attention. We look forward to hearing from you.

Sincerely,

Shuai Wang (On behalf of the author team)

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