LANCANG-MEKONG NEWSLETTER

May 2026, No. 15

Project Title:

State-of-the-art hydrological datasets exhibit low water balance consistency globally

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Project Period:

January 2024 – Decemer 2028



"Impacts of climate change on the water-food-energy nexus in the Lancang-Mekong River Basin"

Project Office

News

May 11

Professor Junguo Liu's Research Team Reveals low water balance consistency across global hydrological datasets

The proliferation and diversification of hydrological datasets have significantly advanced hydrological research. However, the coherence across these datasets remains poorly understood, hindering the comparability of findings derived from different data sources and variables. This study find overall low consistency of numerous state-of-the-art precipitation, evapotranspiration, runoff, and soil moisture datasets in terms of the water balance. Meanwhile, the water balance consistency varies across space, sources, variables, and time. These findings underscore the importance of continued efforts to enhance dataset coherence and reliability for robust hydrological assessments.

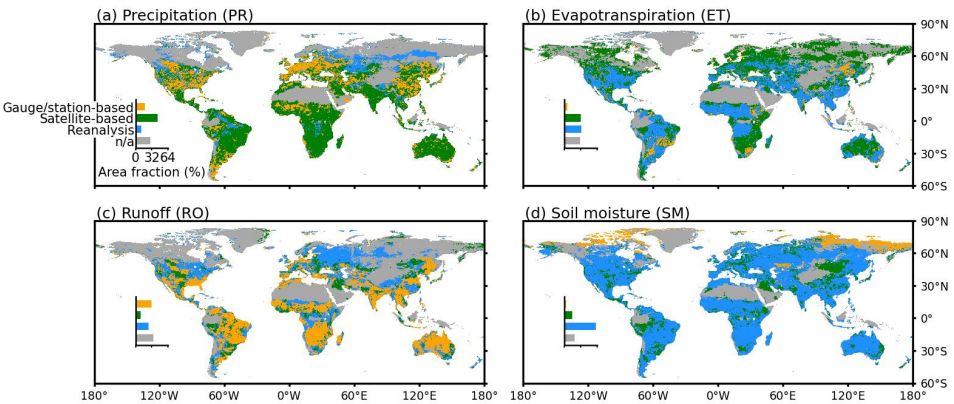


Fig. Types of best-performing datasets across hydrological variables.

The study was published in the journal Earth System Science Data. Hao Huang is the first author. Professor Junguo Liu is the corresponding author, who acknowledges support from the National Natural Science Foundation of China (Grant No. 42361144001), the 111 Project (Grant No. D25014), the National Foreign Experts Program (Category S) (Grant No. S20240116), and the Henan Province Foreign Scientist Studio for Synergistic Management of Water, Food, Energy, and Carbon (Grant No. GZS2024013).

