

Xianyuan Bao

📍 No.539 West Helanshan Road, 750021, Yinchuan, Ningxia, P.R. China

✉️ xybao@stu.nxu.edu.cn 🌐 github.com/baoxianyuan 📥 <https://cv.baoxianyuan.cn/>

EDUCATION BACKGROUND

M.S. of Engineering, River Dynamics

Sep 2023 – Present

School of Civil and Hydraulic Engineering, Ningxia University

B.S. of Engineering, Building Environment and Energy Application Engineering

Sep 2018 – Jul 2022

School of Energy and Environment, Zhongyuan University of Technology

PROJECT EXPERIENCE

[Host] Coupling mechanisms of water-sediment-ecology-economy system in the Yellow River Basin based on multi-agent modeling

Postgraduate Innovation Project of Ningxia University (Grantee: Xianyuan Bao, 6,000 CNY)

2025 – Present

This project aims to construct a coupling model of hydrological processes-vegetation succession-industrial activities, and deconstruct the complex mutual feedback mechanism of water and sediment migration, vegetation succession and industrial activities in the basin. Building upon my previous NSFC research on water-sediment-economy interactions, this work provides critical theoretical support for future watershed management strategies.

[Participate] Coordination mechanism and regulation strategy of multiple processes of water-sediment-ecology economy system in the Yellow River Basin

NSFC Programs for Joint Funds (Grantee: Prof. Enhui Jiang, 11,720,000 CNY)

2023 – Present

The project explores the feedback mechanisms between environmental changes and socio-economic dynamics, with implications for long-term sustainable development in the region. As a key participant in this interdisciplinary project, I am mainly responsible for the research on the threshold for the development and utilization of water and sediment resources in different areas of the Yellow River Basin.

PUBLICATIONS

- [1] **Bao X.**, He, J., Wang, Z., Zhang, D., and Cui, X. (2025). “Research status, challenges and prospects of the utilization of Yellow River sediment resources.” *Journal of Sediment Research*, 50(04), 73-80.

PROFESSIONAL PRESENTATIONS

[Oral Presentation] Co-evolution mechanism of water-sediment resources and economic development from a governing perspective in the Yellow River Basin.

National Academic Forum for Hydraulic Engineering Postgraduates, Wuhan, China May 29, 2025

[Oral Presentation] A cross-scale coupling study on water-sediment and economic development in the yellow river basin based on urban agglomeration scale.

2nd Hydrological Process Forum, Guangzhou, China Apr 20, 2025

[Oral Presentation] Cross-scal ecoupling of water-sediment resources and socio-economic system interactions in the Yellow River Basin over different periods.

1st Innovation Academic Forum of Faculty of Engineering and Geography NXU, Yinchuan, China Oct 17, 2024

HONORS AND AWARDS

2nd prize in the 11th China College Students' Statistical Modeling Competition Aug 2025

3rd prize in National Academic Forum for Hydraulic Engineering Postgraduates May 2025

2nd prize in Innovation Academic Forum of Faculty of Engineering and Geography NXU Nov 2024

Merit Student of Henan Province Oct 2021

2nd prize in China Undergraduate Mathematical Contest in Modeling Dec 2020

GRANTS AND SCHOLARSHIPS

Postgraduate Innovation Project of Ningxia University (6,000 CNY) May 2025

Ningxia University Scholarship (3,000 CNY) Nov 2024

Zhongyuan University of Technology Scholarships (once 2nd & twice 3rd prize, 2,000 CNY) Dec 2018 – Dec 2021

ACADEMIC SERVICES

Reviewer for Academic Journals:

- *Water Resources Management* 07/2025, 01/2026

OTHER EXPLORATIONS

[Participate] Field trip of watershed planning and management

Tsinghua University funded exploration Jun 30, 2024 – Jul 06, 2024