

Wenge Rao

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EDUCATION

Ph.D. in Physical Geography Peking University, Beijing	Sept. 2020 - June 2026 (expected)
Joint Ph.D. in Public Administration Baruch College CUNY, New York	Dec. 2024 - July 2025
B.S. in Ecology Guizhou University, Guizhou	Sept. 2016 - June 2020

PUBLICATION

1. **Rao, W.**, Shen, Z., & Duan, X. (2023). Spatiotemporal patterns and drivers of soil erosion in Yunnan, southwest China: RULSE assessments for recent 30 years and future predictions based on CMIP6. *Catena (Giessen)*, 220, 106703. ([link](#))
2. Zhao, F., Yang, T., Luo, C., **Rao, W.**, Yang, G., Li, G., & Shen, Z. (2022). Comparing elevational patterns of taxonomic, phylogenetic, and functional diversity of woody plants reveal the asymmetry of community assembly mechanisms on a mountain in the hengduan mountains region. *Frontiers in Ecology and Evolution*, 10. ([link](#))
3. Xie, Y., Shen, Z., Camarero JJ., Peñuelas J., Wang, X., Li, J., Rao, W., Chen, X., Zhao, F. & Xiao, F. (2025). Keys to the global treeline formation: thermal limit for its position and moisture for the taxon-specific variation. PNAS
4. Ning, C.#, **Rao, W.#**, Shen, Z. & Li, J. (2024). Hydrothermal gradient drives the elevational transition of relationship between tree growth and forest canopy productivity. (preprint)
5. **Rao, W.**, Shen, Z. & He, G.(2025). Multi-Objective Land Use Optimization Incorporating Renewable Energy Potential Under Climate Change (in submission)
6. **Rao, W.**, Shen, Z., Liu, X., & Liu, Q. (2024). Drought vulnerability of fragmented forests in Great Green Wall of China impacted by climate change and human activities (in submission)
7. Bao, J., **Rao, W.**, Shen, Z. & Zhao, F. (2024). Species diversity patterns and assembly rules of elevational vegetation zones in Yunlong Tianchi of Hengduan Mountains: Integration of Phylogeny and Traits. (in submission)

AWARDS

- Xingye Scholarship, Peking University, 2023
- Research Excellence Award, Peking University, 2023
- Outstanding Presentation Award, The 19th Peking University Eco-Youth Forum, Dec. 2022
- Individual Innovation Award, Guizhou University, Dec. 2019
- Third Prize, Esri China GIS Software Development Competition, Geographic

Design Track, Nov. 2019

- Excellence Award, Esri China GIS Software Development Competition, Remote Sensing Applications Track (as team leader), Nov. 2018

TALKS

- IPWSD (Interdisciplinary PhD Workshop in Sustainable Development at Columbia University) 2025, New York, Apr. 2025
- AGU24, Washington, Dec. 2024
- The IALE 2023 World Congress, Kenya, July 2023
- The 11th IALE-China, Beijing, June 2023
- The 19th Peking University Eco-Youth Forum, Beijing, Dec. 2022
- The 21th Conference on Ecology, Guizhou, Oct. 2022
- The 20th Conference on Ecology, Shanghai, Oct. 2021

SCHOOL ACTIVITIES

- Member, BNU Summer School on Geography and Sustainability 2024
- Chair, Sports and Culture Department, Graduate Student Association, Peking University, June 2021 - June 2022
- Goalkeeper, College Football Team & Point Guard, College Basketball Team, Peking University, Sept. 2020 - Present
- Assistant, Student Affairs Office, Peking University, Sept. 2020 - Present
- Member, School TV Department, Guizhou University, Sept. 2016 - June 2017

SKILLS & INTERESTS

Skills: Proficient in R, Google Earth Engine, ArcGIS, QGIS, MATLAB, and ENVI

Interests: Enjoys ball sports, photography, calligraphy, and singing