You Tu

Email: tuyou1632021@163.com
Research profile: Research Gate; Google Scholar

Education

Sep, 2024 – Present	Xi'an Jiaotong University Ph.D. in Environmental Science and Engineering (Expected June 2028) Research area: *Terrestrial ecosystem services and stability under global change.* Supervisor: Prof. Yiping Wu, https://gr.xjtu.edu.cn/en/web/yipingwu/home
Sep, 2021 – Jun, 2024	Chang'an University M.Sc. in Geography Research area: *Ecosystem patterns, processes, and services under global change*
Sep 2017 – Jun 2021	Chongqing Normal University B.Sc. in Geographic Information Science

Research

Peer-reviewed Publications

[1] **Tu Y**, Wang X*, Zhou J, Wang X, Jia Z, Ma J, et al. (2024) Atmospheric water demand dominates terrestrial ecosystem productivity in China. ***Agricultural and Forest Meteorology***, 355, 110151. https://doi.org/10.1016/j.agrformet.2024.110151 (Q1; IF: 5.6; Citations: 14)

[2] Wang X*, **Tu Y**, Feng X, Liu S, Yin L, Ma J, et al. (2023) Coupled vegetation-climate dominates the evapotranspiration variability of forest protection project. ***Journal of Hydrology: Regional Studies***, 47, 101431. https://doi.org/10.1016/j.ejrh.2023.101431 (Q1; IF: 5.0; Citations: 9)

[3] **Tu Y**, Jiang L*, Liu R, Xiao Z, Min J (2021) Spatiotemporal changes of vegetation NDVI and its driving forces in China during 1982-2015. ***Transactions of the Chinese Society of Agricultural Engineering*** (Transactions of the CSAE), 37, 75-84. https://dx.doi.org/10.11975/j.issn.1002-6819.2021.22.009 (Citations: 97)

[4] Bai J, Wang X*, **Tu Y**, Zhou J, Wang X, Yao W, et al. (2025) Integration of ecosystem service composite index and driving thresholds for ecological zoning management: A case study of qinling-daba mountain, china. ***Journal of Environmental Management***, 384, 125309. https://doi.org/10.1016/j.jenvman.2025.125309 (Q1; IF: 8.4; Citations:10)

[5] Wang X, Wang X*, **Tu Y**, Yao W, Zhou J, Jia Z, et al. (2024) Systematic conservation planning considering ecosystem services can optimize the conservation system in the qinling-daba mountains. ***Journal of Environmental Management***, 368, 122096. https://doi.org/10.1016/j.jenvman.2024.122096 (Q1; IF: 8.4; Citations:14)

[6] Yao W, Wang X, Jia Z, Wang X, …, **Tu Y**, et al. (2025) Reconciling ecosystem service supply-demand mismatches through ecological compensation in the tibetan plateau. ***Carbon Balance and Management***, 20, 30. https://doi.org/10.1186/s13021-025-00325-0 (Q1; IF: 5.9; Citations:2)

[7] Wang X, Wang X, Zhang X, Zhou J, …, **Tu Y**, et al. (2024) Ecological barriers: An approach to ecological conservation and restoration in china. ***Ambio***, 53, 1077-1091. https://doi.org/10.1007/s13280-024-01988-8 (Q1; IF: 6.5; Citations:27)

[8] Zhou J, Wang X*, Wang X, Yao W, **Tu Y**, Sun Z, et al. (2024) Evaluation of ecosystem quality and stability based on key indicators and ideal reference frame: A case study of the qinghai-tibet plateau. ***Journal of Environmental Management***, 370, 122460. https://doi.org/10.1016/j.jenvman.2024.122460 (Q1; IF: 8.4; Citations:12)

Articles in preparation:

[1] **Tu Y**, Wu Y*, Meng Z, et al. (2025) The Resilience Paradox: Widespread Greening Masks Critical Resilience Weakening in China's Ecosystems. *Nature Communications.* (Submitted)

Research Projects

[1] 2025 – Present, Mechanisms Underlying the Responses of Vegetation–Soil Coupled Ecosystems and Their Services to Environmental Change in Northern Shaanxi's Agro-Pastoral Ecotone, National Natural Science Foundation of China **(*participant*)**.

[2] 2025 – Present, Spatiotemporal Dynamics of Regional Carbon Emissions and the Carbon Sequestration Potential of Terrestrial Ecosystems, National High-end Foreign Experts Recruitment Program **(*participant*)**.

[3] 2024 – 2026, The Third National Soil Survey of China **(*participant*)**.

[4] 2023 – 2024, Optimization of Ecological Security Patterns and Ecosystem Services in the Qinling Ecological Barrier, National Natural Science Foundation of China **(*participant*)**.

[5] 2021 – 2024, Research on an Optimization Framework for the Ecological Security Barrier Functions of the Qinghai–Tibet Plateau, Second Tibetan Plateau Comprehensive Scientific Expedition and Research Program **(*participant*)**.

[6] 2021 – 2024 (M.Sc. Research / Master's Thesis), Identification of Priority Conservation Areas for Ecosystem Services in the Qinba Mountain Area Based on Systematic Conservation Planning, Chang'an University.

Conference Participation

Oral Presentations:

[1] The 24th China Conference on Ecology, 2025, China.

[2] The 7th International EcoSummit Congress, 2024, China.

[3] The 23rd China Conference on Ecology, 2024, China.

[4] The 11th Academic Symposium of the Chinese Society for Landscape Ecology, 2023, China.

[5] The 2nd Workshop of Asian Young Geographers, 2022, Online.

[6] IGU International Workshop on Geography and Sustainability, 2021, Online.

Reviewer for the following scientific journals

Geography and Sustainability
Journal of Environmental Management
Resources, Environment and Sustainability

Awards & Scholarships

2024 Excellent Graduate Student Presentation Award, The 23rd China Conference on Ecology, China.

2024 Outstanding Master's Thesis Award, Chang'an University, China.

2024 Outstanding Graduate Award, Chang'an University, China.

2023 Outstanding Graduate Student; First-Class Scholarship, Chang'an University, China.

2022 Excellent Graduate Student Presentation Award, Academic Symposium of the Forest Ecology Section, Chinese Society of Forestry, China.

2022 Outstanding Graduate Student; First-Class Scholarship, Chang'an University, China.

2021 Outstanding Undergraduate Thesis Award, Chongqing Normal University, China.

Technical Skills

My research focuses on terrestrial ecosystem services and stability, especially vegetation responses to global change. I integrate remote-sensing data, geospatial analysis, and ecosystem modeling to quantify regional ecosystem patterns, evaluate ecosystem services and stability, and identify opportunities for ecological optimization to support conservation planning. I am proficient in ArcGIS and ENVI, use Google Earth Engine for large-scale remote-sensing analysis, and routinely apply R and Python for statistical analysis, modeling, and reproducible workflows.

Interests

Outside of research, I keep a positive and balanced lifestyle through painting and hiking. I've always been fascinated by the natural world, and most of my paintings are landscape works. I paint from photos and sometimes from direct observation outdoors, capturing mountains, rivers, lakes, and forests around me. Paying attention to ridge lines, vegetation patterns from near to far, and changing light—like the golden glow on mountain peaks at sunrise or sunset—deepens my appreciation of nature and connects with how I observe landscapes in my work. Hiking keeps me active and close to the outdoors, and I enjoy noticing how terrain, vegetation, and human activities shape landscape patterns along the way.

References

Yiping Wu
Prof., Xi'an Jiaotong University.
rocky.ypwu@gmail.com, yipingwu@xjtu.edu.cn, Google Scholar - Yiping Wu