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Mengye Zhu

Social Science Research Scholar, Doerr School; Senior Scientist, NatCap, Woods Research Natural Capital Project

Bio

BIO

Dr. Mengye Zhu (she/her) is a Senior Scientist at the Natural Capital Alliance and a Social Science Research Scholar at Stanford Doerr School of Sustainability. Her research is focused on climate and environmental policy and political economy, with a particular emphasis on the science–policy interface. She examines key climate discourses, including energy transitions and methane mitigation, with special attention to the roles of "keystone actors," such as state-owned enterprises. Her work also combines policy analysis with sectoral technical assessments, including leading the development of Global Methane Abatement Solutions Tracker (G-MAST). She has extensive policy engagement experience, supporting high-level climate and environmental dialogues and advancing international collaboration. Before joining Stanford, she worked as an Assistant Research Professor and China Program Co-Director at the Center for Global Sustainability, University of Maryland. She received a Ph.D. in Public Administration from Tsinghua University and a Master's in Public Administration from the University of Pittsburgh.

ACADEMIC APPOINTMENTS

- Social Science Research Scholar, Doerr School; Senior Scientist, NatCap, Woods Research Natural Capital Project

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Editorial board member, Energy and Climate Change (2025 - present)

Publications

PUBLICATIONS

- **United States and China Anthropogenic Methane Emissions: A Review of Uncertainties and Collaborative Opportunities** *EARTHS FUTURE*
  Behrendt, J., Smith, S. J., Yu, S., Chen, S., Zhang, H., Zhu, M., Williams, J., Cheng, X., Dule, A., Li, W., Cui, R., Hultman, N.
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- **Critical mineral bottlenecks constrain sub-technology choices in low-carbon energy deployment** *iScience*
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- **Improving land-use efficiency of solar power in China and policy implications** *SOLAR ENERGY*
  Yin, Y., Zhang, D., Zhu, M., Zhang, H., Liu, D., Sun, Y., Zhong, H., Ren, M., Wang, P.
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- **A comparative review of methane policies of the United States and China in the context of US - China climate cooperation** *CLIMATE POLICY*
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- **Domestic and international status of methane management** *Roadmap for the Development of Methane Control Technology in China*
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- **Co-evolution mechanism of policy mix and institutional context of renewable electricity consumption in China** *Energy and Climate Management*
  Liu, Y., Zhu, M., Wang, Y.
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- **Carbon dioxide removal policies and practices in the U.S. and China**
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- **Overview of methane mitigation policies in global key emitters beyond the United States and China**
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- **Bridging the global stocktake gap of climate mitigation: A framework to measure political economy progress** *ONE EARTH*
  Zhu, M., Chaturvedi, V., Clarke, L., Hochstetler, K., Hultman, N., Vogt-Schilb, A., Wang, P.
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- **Air pollution governance in China and India: Comparison and implications** *ENVIRONMENTAL SCIENCE & POLICY*
  Wang, P., Liu, D., Mukherjee, A., Agrawal, M., Zhang, H., Agathokleous, E., Qiao, X., Xu, X., Chen, Y., Wu, T., Zhu, M., Saikawa, E., Agrawal, et al
  2023; 142: 112-120
- **State-owned enterprises and energy transitions: Key research questions for an emerging topic Authors**
  Zhu, M., Al-Sulayman, F., Clark, A., Downie, E., Gupta, R., Hochstetler, K., Hultman, N.
  Center for Global Sustainability, University of Maryland.
  2023
- **Decarbonizing captive coal power plants in Indonesia and implications for Chinese stakeholders: Trends, challenges and opportunities**
  Zhu, M., Lou, J., Cui, R., Cheng, X., Li, S., Li, D., Tumiwa, F., Arinaldo, D. .
  Center for Global Sustainability, University of Maryland.
  2023
- **Interpreting low-carbon transition at the subnational level: Evidence from China using a Natural Language Processing approach** *RESOURCES CONSERVATION AND RECYCLING*
  Tie, M., Zhu, M.
  2022; 187
- **Roadmap for US-China Methane Collaboration: Methane Emissions, Mitigation Potential, and Policies**
  Yu, S., Behrendt, J., Zhu, M., et al
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  2022
- **Low-carbon energy transition from the commanding heights: How state-owned enterprises drive China's wind power "miracle"** *ENERGY RESEARCH & SOCIAL SCIENCE*
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- **A plant-by-plant strategy for high-ambition coal power phaseout in China.** *Nature communications*
  Cui, R. Y., Hultman, N., Cui, D., McJeon, H., Yu, S., Edwards, M. R., Sen, A., Song, K., Bowman, C., Clarke, L., Kang, J., Lou, J., Yang, et al
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- **Measuring political economy progress toward global warming goals**
  Zhu, M., Chaturvedi,, V., Clarke, L., Hultman, N.
  Center for Global Sustainability, University of Maryland.

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- **The China wind paradox: The role of state-owned enterprises in wind power investment versus wind curtailment** *ENERGY POLICY*
  Zhu, M., Qi, Y., Belis, D., Lu, J., Kerremans, B.
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- **The Economy's "New Normal" and China's Low-Carbon Development: From the 11th to the 12th Five-Year Plans** *Annual Review of Low-Carbon Development in China (2015-2016)*
  Zhang, H., Li, H., Zhu, M., Lu, J.
  Social Science Academic Press.2016

- **Policy Recommendations and Producer Responsibility Institution Design for Waste Electronic Product Management** *Waste Electronic Product Management in Major Countries and Relevant Policies in China*
  Zhu, M., et al
  edited by Qu, F., et al
  China Market Press.2016

- **Reshaping Energy Consumption: Towards a Green, Low-Carbon Society** *Annual Review of Low-Carbon Development in China (2015-2016)*
  Dong, W., Zhao, X., Li, H., Zhu, M., Zhang, S., Yang, X., Qi, Y.
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- **The Effect of Shale Gas Development on Carbon Emissions Reduction Based on a LMDI Decomposition Model** *Annual Review of Low-Carbon Development in China 2014*
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