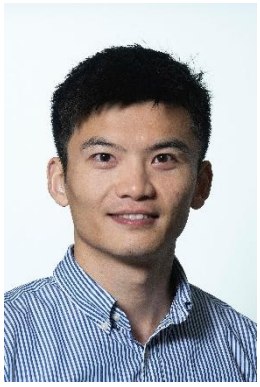
# Quanliang Ye - Curriculum Vitae



## PERSONAL AND CONTACT DETAILS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|---|---|
| Name: | Quanliang YE |
| Gener: | Male (he/him) |
| Nationality: | Chinese |
| Date of Birth: | April 1993 |
| Phone: | +43-67763696035 |
| E-mail: | yequanliang1993@gmail.com |
| Postal Add.: | G119, IIASA, Schlossplatz 1, 2361 Laxenburg, Austria |
| Google Sch.: | https://scholar.google.com/citations?user=WNgSJnsAAAAJ&hl=en |
| ORCID: | https://orcid.org/0000-0002-6135-3403 |
| Personal Web: | https://yequanliang1993.github.io/site_quanliang_ye |


## EDUCATION

**09/2018 – 08/2022** *Doctor of Philosophy* in Industrial Ecology — University of Twente (Netherlands)

*Thesis:* "Enhanced input-output modelling for improved assessment of supply chain-wide environmental pressures in space and time: the case of China"

*Supervisors:* Arjen Hoekstra, Markus Berger, Maarten Krol

**10/2021 – 01/2022** *Research Visitor* — University of Groningen (Netherlands)

*Project:* China's future capital development and associated dynamic impacts on China's carbon emissions

*Supervisors:* Klaus Hubacek, Yuli Shan

**09/2015 – 06/2018** *Master of Science* in Environmental Science — Hohai University (China)

*Thesis:* "Optimal allocation of water resources integrated with water footprint and virtual water trade in water scarce regions"

*Supervisors:* Yi Li, Wenlong Zhang

**09/2011 – 06/2015** *Bachelor of Engineering* in Applied Mathematics — Hohai University (China).

*Thesis:* "A Mathematical Model of Radiation Hydrodynamics"

*Supervisors:* Chunjin Lin

## ACADEMIC PROFESSIONAL APPOINTMENTS

**02/2025 – Present** **Research Scholar**, Energy Climate and Environment (ECE) Program

International Institute for Applied Systems Analysis (IIASA), Austria

Unpack and quantify the potential importance of including heterogeneous human behaviour in integrated assessment models (IAMs)

**03/2023 – Present** **Guest Lecturer**, College of Environment

Hohai University, China

Guest lectures in Advanced Environmental Science (Master's course)

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| **10/2023 – 01/2025** | **Postdoctoral Researcher**, Business Administration, Nijmegen School of Management<br>Radboud University, The Netherlands<br>Downscaling / regionalizing system dynamics-based integrated assessment models (IAMs) |
| **05/2022 – 06/2025** | **Postdoctoral Researcher**, Danish Center of Environmental Assessment (DECA)<br>Aalborg University, Denmark<br>Data collection for resources, products, and industries in space and time; constructing physical supply and use tables for sustainable assessments |

## GRANTS AND AWARDS

GRANTS

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| **2023 – 2026** | European Union's Horizon 2.5 – Climate Energy and Mobility: CHOICE – Innovative integrated assessment models for the food sector. **Contributor**, total budget EUR 4.9 million |
| **2022 – 2026** | European Union's Horizon 2.5 – Climate Energy and Mobility: WorldTrans – Transparent Assessments for Real People. **Contributor**, total budget EUR 4.6 million |
| **2021 – 2025** | KR Foundation of Denmark: The Getting the Data Right project. **Contributor**, total budget DKK 65 million |
| **2018 – 2022** | China Scholarship Council (CSC): Enhanced Input-Output Modelling for Improved Assessment of Supply Chain-Wide Environmental Pressures in Space and Time. **PI**, total budget EUR 64800 |

AWARDS

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| **2024** | Best Presenter Award, The 8th Dalian University of Technology International Young Scholars Forum |
| **2023** | The 17th Philosophy and Social Science Outstanding Achievement Awards, Second award |
| **2021** | China Chamber of Commerce Science and Technology Award, Third award |
| **2019** | Best Presenter Award, The 10th International Society for Industrial Ecology conference |
| **2018 – 2022** | China Scholarship Council (CSC), No. 201806710143 |
| **2018** | Best Master Thesis of Hohai University |
| **2017** | National Scholarship for Graduated Students, 20,000 CNY |
| **2015, 2016, 2017** | First Class Scholarship, Rank 1/65, Hohai University, 12,000 CNY |
| **2013** | Mathematical Contest in Modeling, Third Prize |

## TEACHING & MENTORING EXPERIENCES

**02/2025 – Present** **Mentor**, International Institute for Applied Systems Analysis (IIASA)

- Poornima Kumar, YSSP 2025, University of Oxford (UK)
- Dr. Ling Zhang, Graduated in June 2026, YSSP 2024 / Guest Visitor, Peking University (China)

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|---|---|
| **01/2024 – 01/2025** | **Instructor**, Nijmegen School of Management, Radboud University |
| | • Qualitative Research Methods (Undergraduate / Pre-master Course) |
| | • Project Responsible Organisation 2: Business Analysis for Responsible Organisation (Undergraduate Course) |
| **05/2022 – 09/2023** | **Mentor**, Department of Planning, Aalborg University |
| | • Dr. Yue Xiao, Graduated in December 2023, Vienna University of Economics and Business (Austria) |
| | • Dr. Dongxiao Xu, Graduated in May 2024, Beijing Normal University (China) |
| | • M.Sc. Xinzi Wang, Graduated in June 2024, Hohai University (China) |
| **10/2022 – 11/2022** | **Guest Lecture**, Department of Planning, Aalborg University |
| | • Introduction of Sustainable Development and Environmental Management |
| **01/2020 – 09/2020** | **Mentor**, MWM Group, University of Twente |
| | • M.Sc. Yi Zhang, Graduated in June 2022, Hohai University (China) |
| **09/2019 – 01/2020** | **Teaching Assistant**, MWM Group, University of Twente |
| | • Water and Energy (Master Course) |
| **1/2019 – 11/2019** | **Guest Lecture**, MWM Group, University of Twente |
| | • Input-Output Modelling: From Theory to Practices |
| **11/2016 – 06/2017** | **Mentor**, College of Environment, Hohai University, China |
| | • Yan Cui, Bachelor Thesis |

## RESEARCH OUTPUT

**Summary (Google Scholar)**: h-index (16), total citations (861)

Peer-reviewed publications in scientific journals, **as first author / first corresponding author**:

**Ye, Q.***, Shan, Y.*, and Hubacek, K*. (2024) Promoting inter-generational equity calls strong sustainability and strategic investments in long-lasting capital systems. *Cell Reports Sustainability* 1 (9), 100153 ***(Open Access)***

**Ye, Q.**, Liu,Q., Swamy, D., Gao, L., Moallemi, E. A., Rydzak, F., Eker, S.* (2024) FeliX 2.0: An integrated model of climate, economy, environment, and society interactions. *Environmental Modelling & Software*, 106121 ***(Open Access)***

**Ye, Q.**, Krol, M.S., Shan, Y.*, Berger, M., and Hubacek, K.* (2023) Allocating capital-associated CO2 emissions along full lifespan of capital investments helps re-assessing emission responsibilities. *Nature Communications* 14, 2727 ***(36 citations, Open Access, IF 18.1)***

**Ye, Q.***, Bruckner, M., Wang, R., Schyns, J.F., Zhuo, L., Yang, L., Su, H. and Krol, M.S. (2022) A hybrid multi-regional input-output model of China: Integrating the physical agricultural biomass and food system into the monetary supply chain. *Resources, Conservation and Recycling* 177 ***(64 citations, Open Access, IF 10.4)***

**Ye, Q.***, Wang, R., Schyns, J.F., Zhuo, L., Yang, L. and Krol, M.S. (2022) Effects of production fragmentation and inter-provincial trade on spatial blue water consumption and scarcity patterns in China. *Journal of Cleaner Production* 334 ***(Open Access, IF 10.7)***

**Ye, Q.**, Hertwich, E.G., Krol, M.S., Font Vivanco, D., Lounsbury, A.W., Zheng, X., Hoekstra, A.Y., Wang, Y. and Wang, R.* (2021). Linking the Environmental Pressures of China's Capital Development to Global Final Consumption of the Past Decades and into the Future. *Environmental Science & Technology* 55(9), 6421-6429 ***(32 citations, Open Access, IF 12.2)***

**Ye, Q.**, Li, Y.*, Zhuo, L., et al. (2018). Optimal allocation of physical water resources integrated with virtual water trade in water scarce regions: A case study for Beijing, China. *Water Research* 129, 264-276 ***(175 citations, IF 12.8)***

**Ye, Q.**, Li, Y.*, Zhang, W. and Cai, W. (2019). Influential factors on water footprint: A focus on wheat production and consumption in virtual water import and export regions. *Ecological Indicators* 102, 309-315

Wu, Z., Zhao, M., and **Ye, Q.*** (2023) The influence of technology improvements and the consistency of environmental and economic indicators on decoupling of greenhouse gas emissions and economic growth. *Sustainable Production and Consumption* 42, 14-22 ***(Open Access, IF 9.2)***

Wu, Z., Wang, M. and **Ye, Q.*** (2021) Integrating the inter- and intra-annual dynamic features of capital into environmental footprint assessment: Revisiting China's greenhouse gas footprints, 1995-2015. *Science of the Total Environment* 801, 149629 ***(Open Access)***

Wu, Z., Yang, L., Chen, Q. and **Ye, Q.*** (2021) The impacts of international trade on global greenhouse gas emissions: A thought experiment based on a novel no-trade analysis. *Journal of Environmental Management* 300 ***(ABS 3, Open Access, IF 9.2)***

Wu, Z. and **Ye, Q.*** (2020). Water pollution loads and shifting within China's inter-province trade. *Journal of Cleaner Production* 259 ***(49 citations, Open Access, IF 10.7)***

Wu, Z., **Ye, Q.*** and Tian, Z. (2020). Effects of the Policy and Human Intervention on the Infrastructure-Environment Nexus in China. *Sustainability* 12(18) ***(Open Access)***

Li, Y., Huang, Y., **Ye, Q.***, Zhang, W., et al. (2018). Multi-objective optimization integrated with life cycle assessment for rainwater harvesting systems. *Journal of Hydrology* 558, 659-666 ***(53 citations)***

Peer-reviewed publications in scientific journals, **as co-author**:

Xu, D., Zhang, Y.*, **Ye, Q.**, Shan, Y., Li, J. (2026). Over two-thirds of the historical carbon emissions embodied in legacy capital contribute to China's growing consumption-based emissions responsibility. *Environmental Impact Assessment Review* 118, 108268.

Yu, L., Wu, X., Sang, S., Li, Y., Li, C., **Ye, Q.**, Varis, O., Fu, B., Wang, S. (2026). Yellow River Basin water stress has eased but may persist without enhanced efficiency and sustainable agriculture. *Communications Sustainability* 1(1), 9.

Sun, Z., Zhan, Y., Liu, L., **Ye, Q.**, Zhang, Q.*. (2024). China's dietary transition and its impact on cropland demand for sustainable agriculture. *Sustainable Production and Consumption* 49, 61–71

Wang, X., Zhang, W.*, Li, Y., Tong, J., Yu, F., **Ye, Q.*** (2024). Impacts of water constraints on economic outputs and trade: A multi-regional input-output analysis in China. *Journal of Cleaner Production* 434, 140345

Xu, D., Zhang, Y.*, **Ye, Q.**, Fang, Z., Li, Y., Qang, X., Yang, Z. (2023) Mapping $CO_2$ spatiotemporal transfers embodied in China's trade using a global dynamic network model endogenizing fixed capital. *Journal of Cleaner Production* 427, 139162

Yuguda, K.T., Li, Y.*, Zhang, W., **Ye, Q.** (2020) Incorporating water loss from water storage and conveyance into blue water footprint of irrigated sugarcane: A case study of Savannah Sugar Irrigation District, Nigeria. *Science of The Total Environment* 715, 136886

Li, Y., Zhang, S., Zhang, W., Xiong, W., **Ye, Q.**, Hou, X., Wang, C., Wang, P. (2019). Life cycle assessment of advanced wastewater treatment processes: Involving 126 pharmaceuticals and personal care products in life cycle inventory. *Journal of environmental management* 238, 442-450 ***(134 citations, ABS 3)***

Xiong, W., Li, Y., Zhang, W., **Ye, Q.**, Zhang, S., Hou, X. (2018). Integrated multi-objective optimization framework for urban water supply systems under alternative climates and future policy. *Journal of Cleaner Production* 195, 640−650 ***(41 citations)***

Li, Y.*, **Ye, Q.**, Liu, A., Meng, F., Zhang, W., Xiong, W. (2017). Seeking urbanization security and sustainability: Multi-objective optimization of rainwater harvesting systems in China. *Journal of Hydrology* 550, 42–53 ***(43 citations)***

## ORAL PRESENTATIONS AT SCIENTIFIC CONFERENCES

Zhang, L., **Ye, Q.**, Huang, Q., Kharrazi, A., Wu, Y., Wu, J., Fath, B.D.: Two-decade-long analysis shows rising biodiversity threats and responsibility gaps in global supply chains. *World Biodiversity Forum 2026*. June 2026, University of Zurich, Davos, Switzerland

**Ye, Q.**: Social dynamics of household consumption in ageing societies. *The 12th International Conference on Industrial Ecology*. July 2025, National University of Singapore, Singapore

**Ye, Q.**, Eker, S.: FeliX 2.0: An integrated model of climate, economy, environment, and society interactions. *The 17th IAMC Annual Meeting 2024*. November 2024, Yonsei University, Seoul, South Korea

**Ye, Q.**: Role of long-lasting capital on environmental and sustainable assessment in space and time. *The 11th International Society for Industrial Ecology conference*. July 2023, Leiden University, Leiden, the Netherlands

**Ye, Q.**: Climate Change: The Physical Science Basis, Impacts, Adaptation and Vulnerability, and Mitigation of Climate Change. College of Environment. May 2023, Hohai University, Nanjing, China ***(Invited by the host)***

**Ye, Q.**: From GHG emission gap to SDGs investment gaps: efforts for sustainable development. *Department of Planning*. November 2022, Aalborg University, Aalborg, Denmark

**Ye, Q.**: Water pollution loads, shifting, and key drivers within China's inter-provincial trade. *The 5th International Symposium on Shallow Flows conference*. October 2021, Hohai University, Nanjing, China

**Ye, Q**.: Capital Derived environmental impacts in China. *The 10th International Society for Industrial Ecology conference*. July 2019, Tsinghua University, Beijing, China

**Ye, Q.** and Wang, R.: Trends and patterns in the contributions to water use from different anthropogenic drivers. *The 10th International Society for Industrial Ecology conference*. July 2019, Tsinghua University, Beijing, China

**Ye, Q.** and Wang, R.: Multi-Regional Input-Output Benchmark Evaluation of Water Economic Productivity: A Policy Analysis of "Three Red Line" in China. *AEESP 2019 Research and Education Conference at ASU.* May 2019, Arizona State University, Tempe, AZ, the United States

**Ye, Q.**: Optimal allocation of physical water resources integrated with virtual water trade in water scarce regions: A case study for Beijing, China. *China Research Institute of Water-Saving Agriculture in Arid Regions.* August 2018, Yanglin, Shaanxi, China (***Invited by the host***)

## ACADEMIC SERVICE & SOCIETY MEMBERSHIP

**09/2015 – Present** **Collaboration Liaison**

- University of Oxford (UK)
- Peking University (China)
- Hohai University (China)
- Northwest A&F University (China)
- Leiden University (Netherlands)
- University of Groningen (Netherlands)
- Aalborg University (Denmark)
- Radboud University (Netherlands)
- Norwegian University of Science and Technology (Norway)
- Vienna University of Economics and Business (Austria)
- International Institute for Applied Systems Analysis (Austria)

**03/2016 – Present** **Journal Editor and Referee**

- Communications Sustainability, Nature Portfolio (**Editorial Board Member**)
- Carbon Footprint (**The Youth Editorial Board member**)
- Frontiers in Environmental Science (**Review Editor** for Freshwater Science)
- Nature Food (1)
- Water Research (7)
- Journal of Cleaner Production (12)
- Environmental Research (6)
- Journal of Environmental Management (3)
- Scientific Data (3)

**10/2018 – Present** **Professional Organization Membership**

• The International Society for Industrial Ecology (ISIE)

• The International Input-Output Association (IIOA)

## AUTHORIZED PATENTS

Li, Y., **Ye, Q.**, Zhang, W., Xiong W. and Li, J. Artificial water weed for pollution reduction in rivers. CN201510797105.9. Authorized date 11/07/2017. http://www.soopat.com/Patent/201510797105?lx=FMSQ (*in Chinese*)

Li, Y., Li, J., Zhang, W. and **Ye, Q.** Ecological floating beds for oil pollution reduction in natural water bodies.CN201510799474.1. Authorized date 16/06/2017. http://www.soopat.com/Patent/201510799474 (*in Chinese*)

## LANGUAGE AND COMPUTER SKILLS

**Languages** • Chinese (Mother Tongue) • English (Good) • Dutch (Basic)

**Computer** • Python (Good), Matlab (Good), SPSS (Good), ArcGIS (Good), Q-GIS (Basic)

• Microsoft Office™ tools (Good), Photoshop CS (Good)

**Others** • Badminton (Good), Swimming (Good), Basketball (Good), Archery (Basic)

## ALGORITHMS & DATABASES

**Algorithms** • Full of Economic-Environment Linkages and Integration dX/dt (FeliX) model (***Open Access***)

https://github.com/iiasa/Felix-Model

• Capital-endogenized input-output model

https://github.com/yequanliang1993/capital-endogenized-input-output-model.git, including:

A global version based on EXIOBASE V3, (***Open Access***)

A Inter-provincial version for China (***Open Access***)

• Food and Agricultural Biomass Input-output model for China (***Open Access***)

https://github.com/yequanliang1993/fabio-chn.git

• BONSAI, Big Open Network for Sustainability Assessment Information (***Open Access***)

https://gitlab.com/bonsamurais/bonsai

**Databases** • Time-series physical supply, use, and input-output tables for China between 1990 and 2013, https://doi.org/10.6084/m9.figshare.16571103.v5 (***Open Access***)

• Time-series provincial gross fixed capital formation for China between 1990 and 2017, https://doi.org/10.6084/m9.figshare.20407572.v1 (***Open Access***)