Weitong Long

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Hollandseweg 1, 6706 KN, Wageningen, The Netherlands

Research Interests

Sustainable food systems, food-land-water-climate nexus, climate mitigation, integrated environmental-economic modelling of food systems, and environmental impact assessment of food systems

Education

- **Wageningen University & Research** *Expected 10/2025*
  PhD Candidate of Economics in Environmental and Natural Resource Economics Wageningen, The Netherlands
  - **Supervisor**: Dr. Xueqin Zhu, Dr. Hans-Peter Weikard, Prof. Dr. Oene Oenema, and Prof. Dr. Yong Hou
  - **Program**: The Sino-Dutch Agriculture Green Development (AGD) PhD program [Link]
  - **Dissertation**: Towards sustainable food system in China: transformation options and their connections to the food-land-water-climate nexus [Slides]
  - **Honor**: Awarded for the **PhD Full Scholarship** from China Scholarship Council (CSC) (**48,600 €**; PI) and **Research Grant** from the Sino-Dutch AGD Program for data collection (**8,300 €**; PI)
- **University of California, Davis** *10/2024-01/2025*
  Visiting PhD Student Davis, United States
  - **Supervisor**: Dr. Luis M. Peña-Lévan, Dr. Luis Garcia Covarrubias, and Karl-Friedrich Boy
  - **Honor**: Awarded for the **Junior Researcher Grant** from Wageningen School of Social Sciences (WASS) (**4,000 €**; PI)
- **China Agricultural University** *09/2020-09/2021*
  Visiting PhD Student Beijing, China
  - **Supervisor**: Prof. Dr. Yong Hou
- **China Agricultural University** *09/2018–06/2020*
  Master of Agriculture in Plant Nutrition Beijing, China
  - **Supervisor**: Prof. Dr. Yong Hou and Dr. Hongliang Wang
  - **Dissertation**: Nitrogen footprint of China's pig production and feeding mitigation measures
  - **Honor**: Awarded for the **Excellent Master's Degree Thesis** from the Chinese Society of Plant Nutrition and Fertiliser Science (Top 1% best master thesis in China)
- **Hunan Agricultural University** *09/2014–06/2018*
  Bachelor of Agriculture in Agricultural Resources and Environment Changsha, China
  - **Dual Bachelor**: Dual Bachelor of Arts in English

Training Courses

- **European Association of Environmental and Resource Economists (EAERE) Summer School** *07/2023*
  University of Graz Graz, Austria
  - **Course**: Transnational and Cascading Climate Risks and Adaptation
- **Dynamic General Equilibrium Modelling Course** *07/2021*
  Victoria University & University of International Business and Economics Beijing, China
  - **Course**: CHINAGEM, A Monash-Styled Dynamic Computable General Equilibrium Model of China

Publications

F=First Author, O=Other

Citations (Google Scholar: 17/11/2024): Total = 185; H-index = 7; I10-index = 6

[F-1] **Long, W.**, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (2024). **Exploring sustainable food system transformation options in China: An integrated environmental-economic modelling approach based on the applied general equilibrium framework**. ***Sustainable Production and Consumption (SCI & SSCI Q1; IF=10.9)***, 51, 42-54. DOI: 10.1016/j.spc.2024.09.004

[F-2] **Long, W.**, Wang, H., Hou, Y., Chadwick, D., Ma, Y., Cui, Z., & Zhang, F. (2021). **Mitigation of multiple environmental footprints for China's pig production using different land use strategies**. ***Environmental Science & Technology (SCI Q1; IF=10.8)***, 51, 42-54. DOI: 10.1021/acs.est.0c08359

[O-1] Tan, M., Hou, Y., Zhang, T., Ma, Y., **Long, W.**, Gao, C., ... & Oenema, O. (2023). **Relationships between livestock density and soil phosphorus contents–County and farm level analyses**. ***Catena (SCI Q1; IF=5.4)***, 222, 106817. DOI: 10.1016/j.catena.2022.106817

[O-2] Tan, M., Hou, Y., Zhang, L., Shi, S., **Long, W.**, Ma, Y., ... & Oenema, O. (2023). **Decision-making environment of low-protein animal feeding in dairy and poultry farms in China**. ***Nutrient Cycling in Agroecosystems (SCI Q2; IF=2.4)***, 127(1), 85-96. DOI: 10.1007/s10705-023-10295-9

[O-3] Tan, M., Hou, Y., Zhang, L., Shi, S., **Long, W.**, Ma, Y., ... & Oenema, O. (2022). **Nutrient use efficiency of intensive dairy farms in China–Current situation and analyses of options for improvement**. ***Agricultural Systems (SCI Q1; IF=6.1)***, 203, 103495. DOI: 10.1016/j.agsy.2022.103495

[O-4] Tong, B., Zhang, L., Hou, Y., Oenema, O., **Long, W.**, Velthof, G. L., ... & Zhang, F. (2022). **Lower pork consumption and technological change in feed production can reduce the pork supply chain environmental footprint in China**. ***Nature Food (SCI Q1; IF=23.6)***, 1-10. DOI: 10.1038/s43016-022-00640-6

[O-5] Ma, Y., Hou, Y., Dong, P., Velthof, G. L., **Long, W.**, Ma, L., ... & Oenema, O. (2022). **Cooperation between specialized livestock and crop farms can reduce environmental footprints and increase net profits in livestock production**. ***Journal of Environmental Management (SCI Q1; IF=8.0)***, 302, 113960. DOI: 10.1016/j.jenvman.2021.113960

[O-6] Wang, H., **Long, W.**, Chadwick, D., Zhang, X., Zhang, S., Piao, X., & Hou, Y. (2022). **Dietary acidifiers as an alternative to antibiotics for promoting pig growth performance: A systematic review and meta-analysis**. ***Animal Feed Science and Technology (SCI Q1; IF=2.5)***, 115320. DOI: 10.1016/j.anifeedsci.2022.115320

[O-7] Tan, M., Hou, Y., Zhang, L., Shi, S., **Long, W.**, Ma, Y., ... & Oenema, O. (2021). **Operational costs and neglect of end-users are the main barriers to improving manure treatment in intensive livestock farms**. ***Journal of Cleaner Production (SCI Q1; IF=9.7)***, 289, 125149. DOI: 10.1016/j.jclepro.2020.125149

[O-8] Wang, H., **Long, W.**, Chadwick, D., Velthof, G. L., Oenema, O., Ma, W., ... & Zhang, F. (2020). **Can dietary manipulations improve the productivity of pigs with lower environmental and economic cost? A global meta-analysis**. ***Agriculture, Ecosystems & Environment (SCI Q1; IF=6.0)***, 289, 106748. DOI: 10.1016/j.agee.2019.106748

Working Papers

[1] **Long, W.**, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (2024). **Rebound effects may undermine benefits of upcycling food waste and food processing by-products as animal feed in China**. ***Submitted to a Peer-Reviewed Journal (Job Market Paper)***. [Main text] [Supplementary information] [Slides].

Work in Progress

[1] **Long, W.**, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (2024). **Food system transformation is key to achieving food security and environmental sustainability in China**. ***In Preparation***. [Proposal].

[2] **Long, W.**, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (2024). **Exploring transformation options in the food-land-water-climate nexus: towards achieving multiple Sustainable Development Goals in China**. ***In Preparation***. [Proposal].

Conference Presentations

** indicates presenter*

[1] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (07/2024). Quantifying the environmental and economic impacts of feeding China's monogastric livestock with food waste: a general equilibrium approach. Oral presentation delivered at the **29th Annual Conference of European Association of Environmental and Resource Economists (EAERE)**, Leuven, Belgium.

[2] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (06/2024). Quantifying the environmental and economic impacts of feeding China's monogastric livestock with food waste: a general equilibrium approach. Oral presentation delivered at the **III Economy for The Common Good International Conference (ECGIC)**, Leeuwarden, Fryslân, The Netherlands.

[3] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (05/2024). The asymmetric impacts of feeding China's monogastric livestock with food waste on food security and environment sustainability. Oral presentation delivered at the **9th Sino-Dutch Agriculture Green Development (AGD) Symposium**, Wageningen University & Research, Wageningen, The Netherlands.

[4] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (08/2023). Integrated Environmental-economic modelling of sustainable food systems in China. Postal presentation delivered at the **XVII European Association of Agricultural Economists (EAAE) Congress**, Rennes, France.

[5] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (07/2023). Integrated Environmental-economic modelling of sustainable food systems in China. Oral presentation delivered at the **European Association of Environmental and Resource Economists (EAERE) Summer School**, University of Graz, Graz, Austria.

[6] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (02/2023). Environmental trade-offs of dietary structure change can be alleviated by cleaner technology and emission restriction. Oral presentation delivered at the **7th Sino-Dutch Agriculture Green Development (AGD) Symposium**, Wageningen University & Research,

Wageningen, The Netherlands.

[7] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (10/2022). An environmental-economic framework for assessing the impacts of adjustments in crop and livestock systems. Oral presentation delivered at the **Wageningen School of Social Sciences (WASS) PhD Day**, Wageningen University & Research, Wageningen, The Netherlands.

Seminar Talks

** indicates presenter*

[1] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (04/2024). Quantifying the environmental and economic impacts of feeding China's monogastric livestock with food waste: a general equilibrium approach. Oral presentation delivered at the **EconMonday Weekly Lunch Seminar**, Wageningen University & Research, Wageningen, The Netherlands.

[2] **(Invited) Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (12/2023). Food system environmental policy analysis and method application. Oral presentation delivered at the **Plant Nutrition Weekly Seminar**, China Agricultural University, Beijing, China (Online).

[3] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (06/2023). Exploring options for sustainable food systems in China: An integrated environmental-economic modelling approach. Oral presentation delivered at the **EconMonday Weekly Lunch Seminar**, Wageningen University & Research, Wageningen, The Netherlands.

[4] **Long, W.***, Zhu, X., Weikard, H.P., Oenema, O., Hou, Y. (11/2022). The global environmental consequences of adjustments in the food systems in China. Oral presentation delivered at the **EconMonday Weekly Lunch Seminar**, Wageningen University & Research, Wageningen, The Netherlands.

Grants and Awards

- **Junior Researcher Grant** from WASS for the four-month PhD study at UC Davis (**4,000 €**; PI) *07/2024*
- **Travel Grant** from the LEB Travel Fund to participate in the XVII EAAE Congress (**750 €**; PI) *06/2023*
- **Honorarium** for co-organising the 6th and 7th Sino-Dutch AGD Symposiums (**1,000 €**; PI) *02/2023*
- **Educational backpack** for taking courses and attending conferences from WASS (**3,500 €**; PI) *02/2021*
- **Research Grant** from the Sino-Dutch AGD Program for data collection (**8,300 €**; PI) *12/2020*
- **PhD Full Scholarship** from China Scholarship Council (CSC) (**48,600 €**; PI) *12/2020*
- **Excellent Master's Degree Thesis** from the Chinese Society of Plant Nutrition and Fertiliser Science (Awarded to the Top 1% best master thesis in China) *08/2020*
- **The First-Class Master Academic Scholarship** of China Agricultural University (Top 1%) *10/2019*
- **The First Prize** of China Agricultural University English Speech Contest (Top 1%) *11/2018*
- **The Third Prize** of the National English Contest for Chinese College Students (Top 3%) *06/2015*

Teaching Experience

- **ENR32806: Economic Modelling of Sustainability Challenges (Master level, 6 ECTS)** *2023 & 2024 Spring*
  Wageningen University & Research Wageningen, The Netherlands
  - Assisted in teaching ENR32806: Economic Modelling of Sustainability Challenges (Master level, 6 ECTS) with Dr. Xueqin Zhu and Dr. Jack Peerlings
  - Organised tutorials, provided support to master students with modelling and coding inquiries, and completed grading assignments
- **ENR22806: Principles of Climate Change Economics and Policy (Master level, 6 ECTS)** *2022 Winter*
  Wageningen University & Research Wageningen, The Netherlands
  - Assisted in teaching ENR22806: Principles of Climate Change Economics and Policy (Master level, 6 ECTS) with Dr. Xueqin Zhu and Dr. Ina Möller
  - Provided feedback on literature review papers of master students and completed grading assignments

Mentorinng Experience

- **Co-supervisor of Master Thesis** *03/2022-05/2024*
  Wageningen University & Research Wageningen, The Netherlands
  - Co-supervised Jia Zhou with Dr. Xueqin Zhu on the master thesis of "**Exploring optimal cover crop management practice in China Loess Plateau by model simulation and mathematical programming**"
  - Co-supervised Huangshu Zhao with Dr. Hans-Peter Weikard on the master thesis of "**Optimising county-level manure redistribution in Handan, China to balance economic and environmental benefits**"
  - Co-supervised Kehan Qiu with Dr. Rolf Groeneveld on the master thesis of "**A computable general equilibrium model for evaluating the economic impact of biofuel policy in the Netherlands**"

- **Chair of Master Thesis Ring** *01/2022-12/2022*
  Wageningen University & Research Wageningen, The Netherlands
  - Organised weekly sessions to help master students improve the clarity and conciseness of their thesis
  - Facilitated constructive peer feedback to enhance the quality of master students' written work

Academic Services

- **Conference Parallel Session Chair and Discussant** *07/2024*
  European Association of Environmental and Resource Economists (EAERE) [🌐]
  - The 29th Annual Conference of European Association of Environmental and Resource Economists (EAERE) in the session of "Theory models"
- **Conference Abstract Reviewer** *02/2024*
  Agricultural & Applied Economics Association (AAEA) [🌐]
  - The 2024 Agricultural & Applied Economics Association (AAEA) Annual Meeting in the area of "Production Economics"
- **Conference Co-organiser** *06/2022 & 02/2023*
  Sino-Dutch Agriculture Green Development (AGD) Program Committee [🌐]
  - The 6th and 7th Sino-Dutch Agriculture Green Development (AGD) Symposiums

Skills

- **Programming:** General Algebraic Modeling System (GAMS, advanced, e.g. model establishment), General Equilibrium Modelling PACKage (GEMPACK, intermediate), R (intermediate).
- **Modelling:** Applied general equilibrium (AGE) modelling, life cycle assessment (LCA), input-output (I-O) analysis, material flow analysis (MFA), and meta-analysis.
- **Software:** ArcGIS, Simapro, Github, Latex, and Microsoft Office.
- **Languages:** Native to Mandarin Chinese. Strong reading, writing, and speaking competencies in English.

Professional Association Memberships

- American Economic Association (AEA)
- Agricultural & Applied Economics Association (AAEA)
- Association of Environmental and Resource Economists (AERE)
- European Economic Association (EEA)
- European Association of Agricultural Economists (EAAE)
- European Association of Environmental and Resource Economists (EAERE)
- International Association of Agricultural Economists (IAAE)
- International Food And Agribusiness Management Association (IFAMA)
- International Society for Ecological Economics (ISEE)
- International Society for Industrial Ecology (ISIE)
- American Geosciences Union (AGU)
- European Geosciences Union (EGU)
- Global Analysis Trade Project (GTAP) Network

References

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