Shun Chonabayashi, Ph.D.

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Research Interests

Environmental and Resource Economics; Development Economics; Agricultural Economics; Climate Change Economics; Applied Econometrics

Academic Appointments

2022–Present **Associate Professor**
Faculty of Economics and Business Administration, Soka University

2009–2010 **Postgraduate Fellow**
Yale School of the Environment, Yale University

Professional Appointments

The World Bank

2024–2026 Consultant
2015–2021 Economist (World Bank Young Professionals Program, YPP)
2008–2010 Consultant

Education

- Ph.D. in Natural Resources, Cornell University 2021
- M.A. in International and Development Economics, Yale University 2008
- B.A. in Economics, Soka University 2007

Peer-Reviewed Journal Articles

Akter, Mahfuza, Raihan, Md. Lamiur, Mukta, Most Zannatun Nahar, Rahman, Hammadur & **Chonabayashi, Shun**. 2025. Adapting to waters: Socio-economic influences on flood coping strategies among farmers in Bangladesh's char areas. Journal of Saemaulogy 10, no. 1: 89-120

Saeed, Wajiha, Iman Haqiqi, Qinqin Kong, Matthew Huber, Jonathan Buzan, **Shun Chonabayashi**, Kazuki Motohashi, and Thomas Hertel, 2022. The Poverty Impacts of Labor Heat Stress in West Africa under a Warming Climate. Earth's Future. doi: 10.1029/2022EF002777

Constenla-Villoslada, Susana, Yanyan Liu, Jiaming Wen, Ying Sun, **Shun Chonabayashi**. 2022. Large-scale land restoration improved drought resilience in Ethiopia's degraded watersheds. Nature Sustainability: doi: 10.1038/s41893-022-00861-4

Chonabayashi, Shun, Theepakorn Jithitikulchai, and Yeqing Qu. 2020. Does agricultural diversification build economic resilience to drought and flood? Evidence from poor households in Zambia. African Journal of Agricultural and Resource Economics, Volume 15, Number 1: 65-80.

Massetti, Emanuele, Robert Mendelsohn, and **Shun Chonabayashi**. 2016. How Well Do Degree Days over the Growing Season Capture the Effect of Climate on Farmland Values? Energy Economics, 60: 144-150. doi: 10.1016/j.eneco.2016.09.004

Li, Shanjun, Jun Yang, Ping Qin, and **Shun Chonabayashi**. 2016. Wheels of Fortune: Subway Expansion and Property Values in Beijing. Journal of Regional Science. doi:10.1111/jors.12284

Mendelsohn, Robert, Kerry Emanuel, **Shun Chonabayashi**, and Laura Bakkensen. 2012. The Impact of Climate Change on Global Tropical Cyclone Damage. Nature Climate Change 2(3): 205–209 (Based on World Bank Policy Research Working Paper 5562).

Books

Johnson, Justin Andrew, Giovanni Ruta, Uris Baldos, Raffaello Cervigni, **Shun Chonabayashi**, Erwin Corong, Olga Gavryliuk, James Gerber, Thomas Hertel, Christopher Nootenboom, Stephen Polasky. 2021. The Economic Case for Nature : A Global Earth-Economy Model to Assess Development Policy Pathways. World Bank, Washington, DC. (c) World Bank. openknowledge.worldbank.org/handle/10986/35882 License: CC BY 3.0 IGO.

Mani, Muthukumara, Sushenjit Bandyopadhyay, **Shun Chonabayashi**, Anil Markandya, and Thomas Mosier. 2018. South Asia's Hotspots: The Impact of Temperature and Precipitation Changes on Living Standards. World Bank, Washington, DC. (c) World Bank. openknowledge.worldbank.org/entities/publication/8a6180...

Book Chapters

Jithitikulchai, Theepakorn, and **Shun Chonabayashi**. Climate Resilience Investments and Agricultural Household Livelihoods: Lessons from a Climate-Vulnerable Economy. In Nguyen, Nhan & Leal, Walter (Eds.), Climate Change in the Tropics: Understanding and Addressing the Impacts of Climate Change to Tropical Regions. Springer Nature. 2026 (forthcoming).

Chonabayashi, Shun, and Theepakorn Jithitikulchai. Estimating the Impact of Droughts and Floods on African Farmers. In Dinar, A. & Mendelsohn, R. (Eds.), Handbook on Climate Change Impacts, Mitigation, and Adaptation in Agriculture. Edward Elgar Publishing, 2026. (Published.)

Chonabayashi, Shun. 2023. "Economics of Climate Change," (in Japanese) in Baba, Yoshihisa, Koichi Kandachi, Isao Takagi (Eds.), Humanistic Economics x SDGs, Daisan Bunmeisha, pp.207-228.

Karakulah, Kenan, Glenn-Marie Lange, Yewande Awe, and **Shun Chonabayashi**. 2021. Impact of Air Pollution on Human Capital. in World Bank. The Changing Wealth of Nations 2021: Managing Assets for the Future. Washington, DC: World Bank.

Lange, Glenn-Marie, **Shun Chonabayashi**, Esther Naikal, and Kenan Karakulah. 2021. "The Impact of Air Pollution on Human Capital Wealth," in Fraumeni, Barbara M. (Ed.), Measuring Human Capital, Academic Press.

Technical Reports, Working Papers, and Proceedings

Pagiola, Stefano and **Shun Chonabayashi**. 2020. "World Bank Landscape Projects: What Role for Natural Capital Accounting?", in Vardon, M. and Bass, S. (Eds.) (2020). Natural Capital Accounting for Better Policy Decisions: Measuring and Valuing Natural Capital to Improve Landscape Management and Governance. Proceedings and Highlights of the 4th Forum on Natural Capital Accounting for Better Policy Decisions. World Bank WAVES, Washington D.C.

L.A. Acosta, I. Nzimenyera, R.M. Munezero, R.S. Sabado, Jr., G.D.P.Kishor, H.Luchtenbelt, M. Fofana, I. Solvang, A. Kim, A. Bhatt, A. Jacob, A. Meagher, B. Chhun, C. Hopkins, C.M. Aboagye, C. Krug, D. Vertesy, D. Eaton, F. Eboli, F. Tubiello, H. Mac Nulty, I. Hascic, J. Vause, J.G. Pineda, J. Musango, K. Braga, K Kitamori, L.F. de Meira, M. Harsdorff, M. Astralaga, M.T. Pisani, M. Dar Ali, M. de la Chaux, M.K.Lee, N. Girouard, N. Cantore, P.M. Batistic, R. Isea, R. Damania, R. Hogeboom, R. Lasco, R. Cavatassi, R. Gainza, R.J. Mamiit, S. Mathur, S.F. De Cordoba, **S. Chonabayashi**, T. Abulzahab, T. Arndt, T. El Achkar, U. Iftikhar (UNDP), V. Sirimaneetham, V. Valido, and X. Pan. (2025). Summary Report: Green Growth Index 2025 – Measuring green growth performance, potential, and pathways, Green Growth Performance Measurement Program (GGPM), Global Green Growth Institute (GGGI), Seoul, South Korea.

L.A. Acosta, I. Nzimenyera, R. Sabado Jr., R.M. Munezero, A. Nantulya, K. Shula, S.G.L. Quiñones, H.G.H. Luchtenbelt, T. Czvetkó, S. Lee, and G.P. Adams. 2022. Green Growth Index 2022 – Measuring performance in achieving SDG targets, GGGI Technical Report No. 27, Green Growth Performance Measurement Program, Global Green Growth Institute (GGGI), Seoul, South Korea [Contributors: M. Astralaga, A. Bhatt, N. Cantore, R. Cavatassi, **S. Chonabayashi**, D. Eaton, F. Eboli, G. Esambe, L. Farnia, R. Gainza, R. Hamwey, R. Hogeboom, U. Iftikhar, A. Jacob, J. John-Norville, K. Kitamori, C. Krug, G. Lafortune, R. Lasco, S. Liu, B. Liu, J. Maughan, N. Nierhoff, F. Sheng, V. Todorov, J. Vause, C. Hopkins, F. Tubiello, H. Rankine, J.G. Pineda, Z. Zarnic, N.M. Puyo, D.J. Valencia, H. Tembo, A. Chiludo, A. Sakala, A. Nyambe, A. Ntonde, B. Musonda, B. Joseph, B. Mwileli, B. Simainga, B. Nshindano, C. Langa, C. Chishimba, C. Siningna, C. Sheperd, C. Chitembo, C. Malunda, D. Musanshe, D. Kafwamba, D. Hamuwele, D.P. Mulenga, D.G. Tembo, D. Phiri, E.M. Slutilica, E. Mkumba, E.B. Chilema, E.C. Lubumbashi, E. Chulema, E. Malaolo, E. Malaslo, E. Nkomo, F. Mwenda, F. Kalabe, F. Mpampi, G.K. Sikantongwe, G. Naasumh, G.F. Gwandwe, I. Sinpambi, I. Fwalanya, J. Kabandala, J. Sunyangul, J. Ntemba, K. Mwambalwa, K. Kawesha, K. Chalelca, K. Chalwe, L. Mwila, L. C. Kalenpe, L.M. Kapata, L.N. Bwalya, L. Pltini, L.M. Richard, M. Selemani, M. Hazemba, M. Tembo, M. Nkoya, M. Melele, M. Masugyo, M. Biu, M. Ng'ambi, M. Kabwe, M. Mubanga, M. Mukuma, M.E. Mody, M.D. Lwando, M.M. Daka, N. Kabwe, N. Florence, N. Sinliangwe, N. Munh, O. Kawanga, O. Mamnwa, O.P. Zulu, P. Gosparini, P. Tembo, P. Kabzunda, P. Daka, P.H. Nyanga, R. Chipenge, S. Woolhouse, S. Sikantonsme, S. Moya, S. Kabwen, S. Mubawga, W. Mapulagu, Y. Vibetti]

L.A. Acosta, S. Zabrocki, I. Nzimenyera, R. Sabado Jr., J.R. Eugenio, S.P. Gerrard, H.G.H. Luchtenbelt, S. Lee, K. Lehmann, and G.P. Adams. 2021. Green Growth Index 2021 – Measuring performance in achieving SDG targets, GGGI Technical Report No. 16, Green Growth Performance Measurement Program, Global Green Growth Institute (GGGI), Seoul, South Korea [Contributors: M. Astralaga, A. Bhatt, N. Cantore, R. Cavatassi, **S. Chonabayashi**, D. Eaton, F. Eboli, G. Esambe, L. Farnia, R. Gainza, R. Hamwey, R. Hogeboom, U. Iftikhar, A. Jacob, J. John-Norville, K. Kitamori, C. Krug, G. Lafortune, R. Lasco, S. Liu, B. Liu, J. Maughan, N. Nierhoff, F. Sheng, V. Todorov, J. Vause, C. Hopkins, F. Tubiello, H. Rankine, J.G. Pineda, Z. Zarnic, Nera Mariz Puyo, Sarena Grace Quiñones, and Dervin John Valencia]

Acosta, L.A., P. Maharjan, H. Peyriere, L. Galotto, R.J. Mamiit, C. Ho, B.H. Flores, and O. Anastasia. 2019. Green Growth Index: Concepts, Methods and Applications, GGGI Technical report No. 5, Green Growth Performance Measurement (GGPM) Program, Global Green Growth Institute, Seoul. [Contributors: B.H. Flores, A. Sharma, A. Jacob, B. Liu, C. Hopkins, C. Krug, F. Eboli, F. Tubiello, F. Sheng, G. Lafortune, G. Montt, J. Norville, J. Maughan, J.G. Pineda, L. Farnia, N. Beltchika, N. Cantore, R. Hogeboom, R. Hamwey, R. Cavatassi, R.G. Carmenates, S. Koissy-Kpein, S. Felix, **S. Chonabayashi**, U.A. Iftikhar, V. Todorov, Z. Zarnic, D. Eaton, E. Eugenio, J. Sales, M.V. Espaldon, A. Dewi, A. Haja, and N.M. Puyo]

Mendelsohn, Robert, Kerry Emanuel, and **Shun Chonabayashi**. 2011. The Impact of Climate Change on Tropical Cyclone Damages in the United States. World Bank Policy Research Working Paper No. 5561. Washington, DC: World Bank.

Selected Media and Public Outreach

Supervised student projects on AI-assisted food-waste reduction at Soka University, featured in a university press release reproduced by Okinawa Times and Livedoor News (November 27, 2025).

Chonabayashi, Shun (2025). What Happens to Society as Temperatures Rise? Exploring the Future through Economics and Data. Yumenavi, Soka University. [Video lecture in Japanese.] Video · Related short article.

Chonabayashi, Shun. "Climate Change and Humanistic Economics," (in Japanese), Seikyo newspaper, October 23, 2023.

Media coverage of the coauthored World Bank report *South Asia's Hotspots* (2018): The New York Times, "Global Warming in South Asia: 800 Million at Risk"; and The News International, "Climate change impact: Sindh most vulnerable hotspot in Pakistan, says WB."

World Bank (2017). Interview with Shun Chonabayashi, World Bank Staff Profiles, February 3. [In Japanese.] Interview.

Contributions to International Organization Reports

- Unlocking Nature-Smart Development : An Approach Paper on Biodiversity and Ecosystem Services (2021)
- FAO and UNEP. 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Contributing Author to Chapter 4: "People, Biodiversity and Forests".
- Serajuddin, Umar, et al. 2017 Atlas of sustainable development goals 2017 from World Development Indicators. No. 114769. The World Bank, 2017. Contributing Author to Chapter 13: "Climate action".
- Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters (2017)
- Natural Hazards, UnNatural Disasters: The Economics of Effective Prevention (2010)
- Low-Carbon Development: Latin American Responses to Climate Change (2010)

Selected Ongoing Research

- The Role of Temperature Measurement Errors in Estimating Climate Change Impacts on Crop Yields (with Ariel Ortiz-Bobea and Kenji Komeda)
- Ecosystem Services, Land-Use Change, and Sectoral Development Pathways in Thailand: Integrating Biophysical, Tourism, Agricultural, and Macroeconomic Perspectives (with Muthukumara S. Mani, Subina Thapaliya, Anil Markandya, and Yuji Fujita).
- Impact Evaluation of Ethiopia Sustainable Land Management Program (with Yanyan Liu and Mengying Wang)
- Impacts of Ethiopia's Sustainable Land Management Program on Women and Children Health (with Yanyan Liu and Mengying Wang)

Research Grants

- Incorporating Temperature Measurement Error in Estimating Climate Change Impacts on Agriculture, Grants-in-Aid for Scientific Research, Grant-in-Aid for Early-Career Scientists, ¥4,680,000. PI. (2026-2027)
- Improving Methodologies to Estimate the Impact of Droughts and Floods on African Farmers, Grants-in-Aid for Scientific Research, Fund for the Promotion of Joint International Research (Early-Career Scientists), ¥4,680,000. PI. (2023-2025)
- International Joint Research on Building Resilience to Climate Change Impacts and Risks, Grants-in-Aid for Scientific Research, Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), ¥20,020,000. Co-I. (2022-2025)
- Global Program on Sustainability Data Platform, Global Program on Sustainability (GPS), $250,000. PI. (2021)
- Ecosystem Services Assessment Toolkit, The World Bank, $500,000. Co-PI. (2019-2021)
- Estimating the impact of the landscape program in Ethiopia, Program on Forests (PROFOR), $150,000. PI. (2019)
- Environment and Sustainability Data, The World Bank, $220,000. Co-PI. (2017-2019)
- Exploring Methodologies to Measure Household Climate Resilience in Vulnerable Countries and Communities, Climate Investment Funds, Evaluation and Learning Special Initiative, $150,000. PI. (2017-2020)

Honors, Awards, and Fellowships

- Contributor to the Global Green Growth Index, recipient of the Innovative Impact Award at the AI for Good Global Summit (2026).
- Soka University comprehensive performance evaluation award (2026)
- Excellence Award (Type A), Excellence Award (Type B), Effort Award (Type A), 3rd SDGs Good Practice Awards (2026), Chonabayashi Seminar (Supervisor)
- Newcomer Award, CAS-Net Japan Sustainable Campus Awards, Chonabayashi Seminar: "Promoting Environmentally Responsible Student Behaviors at Soka University" (2025)
- Effort Award (Type A), 3rd SDGs Good Practice Awards (2025), Chonabayashi Seminar (Supervisor)
- Effort Award (Type B), 2nd SDGs Good Practice Awards (2024), Chonabayashi Seminar (Supervisor)
- Soka University comprehensive performance evaluation award (2023)
- NAREA Conference Scholarship (2015)
- AAEA Early Career Professional and Graduate Student Travel Grant (2015)
- EAERE-FEEM-VIU European Summer School Travel Grant (2014)
- AAEA Early Career Professional and Graduate Student Travel Grant (2014)
- Cornell University Graduate School Conference Grant (2013, 2014)
- Cornell University Graduate Research Assistantship (2013)
- Joint Japan/World Bank Graduate Scholarship Program (2012-2014, declined)
- Japan IMF Scholarship Program (2010-2012)
- Yale Tuition Scholarship (2007)
- Soka University Da Vinci Award (2007)
- Soka Alumni Association (Soyukai) Scholarship (2005-2006)

Student Supervision and Mentorship

- Supervised Kimihiro Horinouchi and Sachie Iijima, recipients of the AAERE Best Poster Award (2025) for "Mitigating the use of disposable cutlery with bring-your-own-cutlery discounts.

Graduate Student and Post-graduate Research Associate Placements

- Md. Lamiur Raihan: Assistant Professor, Bangladesh Agricultural University, 2023–2025
- Kenji Komeda: PhD student, University of Warwick, 2023–2024
- Yuji Fujita: Short-Term Consultant, World Bank, 2023–2024
- Subina Thapaliya: Short-Term Consultant, World Bank, 2024
- Yeqing Qu: Alibaba Group, 2018–2021

Undergraduate Student Placements

- Masanori Inada: M.Sc. in Sustainability Economics, Wageningen University & Research (2026)
- Haruki Hidaka: M.Sc. in Economics, University of Bonn (2026)
- Yuta Ishinaka: Master of Public Policy Program, Graduate School of Public Policy, The University of Tokyo (2026); Outstanding Undergraduate Thesis Award in Economics, Soka University
- Taiga Hashimoto: M.A. Program in Economics, Graduate School of International Social Sciences, Yokohama National University (2026)
- Li Zeyu: Master of Public Policy Program, Graduate School of Public Policy, The University of Tokyo (2026)
- Kang Jianrui: Master of System Design and Management, Keio University (2024)

Presentations and Invited Seminars

- Ecosystem Services, Land-Use Change, and Sectoral Development Pathways in Thailand: Integrating Biophysical, Tourism, Agricultural, and Macroeconomic Perspectives. 20th Environment for Development (EfD) Annual Meeting, IIM Kozhikode, India, November 13, 2026. Programme.
- 15th Congress of the Asian Association of Environmental and Resource Economics (AAERE), Jakarta, Indonesia, conference speaker (August 21, 2026)
- 7th World Congress of Environmental and Resource Economists (WCERE 2026), conference speaker (2026)
- 2026 Africa Meeting of the Econometric Society, conference speaker (2026)
- World Bank Tokyo Office, World Bank Seminar: From Risk to Resilience: Rethinking Growth in Southeast Asia, commentator (2025)
- Kobe University, International Workshop on Climate and Environmental Economics, invited speaker (2025)
- Asian Association of Environmental and Resource Economics (AAERE), conference speaker (2025)
- Workshop of the Handbook on Climate Change Impacts, Mitigation, and Adaptation in Agriculture (online), conference speaker (2025)
- Waseda University, Workshop on Climate and Environmental Economics, invited speaker (2023)
- Kobe University, Climate Science and Economy Seminar, invited speaker (2023)
- The Sixth World KLEMS Conference, invited speaker (2021)
- The World Bank, Environment, Natural Resources and Blue Economy Global Practice Webinar, invited speaker (2020)
- The World Bank, Sustainable Development Data Lab Tech Talk, invited speaker (2019)

- The World Bank, Data Day, invited speaker (2019)
- Climate Investment Funds (CIF) Evaluation and Learning Initiative Transformational Change Learning Partnership (TCLP) workshop, invited speaker (2018)
- Cornell University, Department of Natural Resources Seminar Series, invited speaker (2018)
- American Evaluation Association, conference speaker (2017)
- Northeast Agricultural and Resource Economics Association (NAREA) and the Canadian Agricultural Economics Society (CAES), conference speaker (2015)
- 5th World Congress of Environmental and Resource Economists, Istanbul, Turkey, conference speaker (2014)
- Agricultural and Applied Economics Association (AAEA), conference speaker (2013)
- EAERE-FEEM-VIU European Summer School "The Economics of Adaptation to Climate Change", conference speaker (2013)
- Agricultural and Applied Economics Association and Canadian Agricultural Economics Society annual meeting, conference speaker (2013)

Professional Service

- Member, International Expert Group, Global Green Growth Index, Global Green Growth Institute (GGGI).

Referee Service

Environmental Economics and Policy Studies; Economics of Disasters and Climate Change; Food Policy; Q Open; Mitigation and Adaptation Strategies for Global Change; Regional Environmental Change; Communications Earth & Environment; Humanities & Social Sciences Communications (formerly Palgrave Communications); Sustainability.

Teaching

- Soka: Environmental Economics (graduate), Econometrics, Economics of Climate Change, Social System Solution II, Economics Lecture A (Introductory Microeconomics), Humanistic Economics, Global Citizenship Program (GCP) Tutorial, Advanced Seminar I-IV, Graduation Thesis
- Cornell: Introduction to Statistics (TA for Jeffrey Lewis, Fall 2012, Spring 2013); Intermediate Microeconomics (TA for Rick Geddes, Spring 2012)
- Yale: Introductory Microeconomics (TA for Steven Berry, Fall 2007)

Pre-Collegiate Teaching and Outreach

- Soka High School: Instructor, Global Citizenship Inquiry Studies (GCIS), 2021–Present; lectures and mentoring for inquiry-based student research on global and environmental challenges
- Kansai Soka High School: Guest Instructor, UP (University Partnership) Class, June 22, 2026; lecture on climate change, economic growth and environmental conservation, and career pathways

Skills

Programming/software: R, Stata, Python, MATLAB, ArcGIS, GAMS, LaTeX, HTML, Tableau. **Languages:** English (fluent), Japanese (native), French (basic).

Last updated: November 16, 2026