

Vartika Singh, PhD

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🌐 <https://vartika271987.github.io/vartikasingh.github.io/>

Employment History

- July 2024 – ···· **Sr Research Analyst** International Food Policy Research Institute, New Delhi.
- 2019 – June 2024 **Sr Research Officer** Indian Institute of Management, Ahmedabad.
- 2017 – 2019 **Program Manager** International Food Policy Research Institute, New Delhi, India.
- 2015 – 2017 **Research and Training Manager** EPoD, Harvard Kennedy School, India
- 2012 – 2015 **Research Analyst** International Food Policy Research Institute, New Delhi, India.
- 2011 – 2012 **Program Associate** ICICI Foundation for Inclusive Research.

Education

- 2019 – 2025 **PhD** Faculty of Life Sciences, Humboldt University of Berlin. **June 2025**
Thesis title: *Pathways to Sustainable Transformation in India by 2050: A Food-Water-Land Nexus Approach*
- 2009 – 2011 **Master's in Development Studies** Tata Institute of Social Sciences, Mumbai, India.
- 2006 – 2009 **Bachelor's in Economics** Hindu College, Delhi University, India.

Publications

High Impact

- 1 Bodirsky, Benjamin, Felicitas Beier, Florian Humpenöder, **Vartika Singh**, et al. "A food system transformation can enhance global health, environmental conditions and social inclusion." *Nature Food*, 2025.
- 2 **Singh, Vartika**, Miodrag Stevanovic, et al. "A comparison of the effects of local and EAT-Lancet dietary recommendations on selected economic and environmental outcomes in India." *Food Policy*, 2025.
- 3 Perez, Nicostrato, **Vartika Singh**, Claudia Ringler, Hua Xie, Tingju Zhu, Edwin H Sutanudjaja, and Karen Vilholth. "Ending groundwater overdraft without affecting food security." *Nature Sustainability*, 2024.
- 4 Mosnier, Aline, Valeria Javalera-Rincon, Sarah Kate Jones, Robbie Andrew, Zhaohai Bai, Justin Baker, **Vartika Singh**, et al. "A decentralized approach to model national and global food and land use systems." *Environmental Research Letters*, 2023.
- 5 **Singh, Vartika**, Miodrag Stevanovic, Chandan Kumar Jha, Felicitas Beier, Ranjan Kumar Ghosh, Hermann Lotze-Campen, and Alexander Popp. "Assessing policy options for sustainable water use in India's cereal production system." *Environmental Research Letters*, 2023.
- 6 Jha, Chandan Kumar, Ranjan Kumar Ghosh, **Vartika Singh**, et al. "Pathway to achieve a sustainable food and land-use transition in India." *Sustainability Science* 18, no. 1 (2022).
- 7 Jha, Chandan Kumar, **Vartika Singh**, et al. "The role of food and land use systems in achieving India's sustainability targets." *Environmental Research Letters* 17, no. 7 (2022).
- 8 Mosnier, Aline, Guido Schmidt-Traub, Obersteiner, **Vartika Singh**, et al. "How can diverse national food and land-use priorities be reconciled with global sustainability targets? Lessons from the FABLE initiative." *Sustainability Science* 18, no. 1 (2022).
- 9 Ghosh, Ranjan Kumar, Shweta Gupta, **Vartika Singh**, and Patrick S Ward. "Demand for crop insurance in developing countries: new evidence from India." *Journal of Agricultural Economics* 72, no. 1 (2021).

- 10 Gupta, Shweta, Avinash Kishore, Muzna Fatima Alvi, and **Vartika Singh**. "Designing better input support programs: Lessons from zinc subsidies in Andhra Pradesh, India." *PLOS One* 15, no. 12 (2020).
- 11 Ward, Patrick S, Shweta Gupta, **Vartika Singh**, et al. "What is the intrinsic value of fertilizer? Experimental value elicitation and decomposition in the hill and terai regions of Nepal." *Food Policy* 90 (2020).
- 12 Ward, Patrick S, and **Vartika Singh**. "Using field experiments to elicit risk and ambiguity preferences: Behavioural factors and the adoption of new agricultural technologies in rural India." *The Journal of Development Studies* 51, no. 6 (2015).
- 13 Ward, Patrick S, David L Ortega, David J Spielman, and **Vartika Singh**. "Heterogeneous demand for drought-tolerant rice: Evidence from Bihar, India." *World Development* 64 (2014).

Other Peer-reviewed Articles

- 1 Berger, Iris, Manan Bhan, Rekha Bhangaonkar, Abhishek Chaudhary, **Vartika Singh**, et al. "Integrated land systems for sustainable food production and biodiversity conservation in the semi-arid to moist tropics: stakeholder perspectives from Andhra Pradesh, India." *Frontiers in Sustainable Food Systems*, 2025.
- 2 Bustamante, Mercedes, Joyashree Roy, Daniel Ospina, **Vartika Singh**, et al. "Ten new insights in climate science 2023/2024." *Global Sustainability*, 2023.
- 3 Urfels, Anton, Kai Mausch, **Vartika Singh**, et al. "Farm size limits agriculture's poverty reduction potential in Eastern India even with irrigation-led intensification." *Agricultural Systems*, 2023.

In Review

- 1 **Singh, Vartika**, Prantika Das, Miodrag Stevanovic, et al. "An Inclusive agri-food systems transformation pathway for India." *Preprint, Under revision at Nature Food*, 2025.

Policy Briefs and Discussion Papers

- 1 **Singh, Vartika**, Abhijeet Mishra, et al. "Biofuels in India: Trading off climate mitigation with water security goals." 2025.
- 2 Kishore, Avinash, and **Vartika Singh**. "Seeds, water, and markets to increase wheat productivity in Bihar, India." 2021.
- 3 Jha, Chandan Kumar, Ranjan Kumar Ghosh, Satyam Saxena, **Vartika Singh**, Miodrag Stevanović, Alexander Popp, and Hermann Lotze-Campen. "Pathways to Sustainable Land-Use and Food Systems, 2020 Report of the FABLE Consortium." 2020.
- 4 Kishore, Avinash, **Vartika Singh**, and Shweta Gupta. "Sticky Seeds: Why Old Seeds Continue to Dominate the Rice-Wheat Agriculture in Eastern India." 2020.
- 5 Ceballos, Francisco, Samyuktha Kannan, **Vartika Singh**, and Berber Kramer. "Digital Technologies for financial inclusion of smallholder farmers: Needs assessment in three states of India." 2019.
- 6 Ghosh, Ranjan Kumar, Shweta Gupta, **Vartika Singh**, and Patrick S Ward. "Is there a market for multi-peril crop insurance in developing countries moving beyond subsidies? Evidence from India." Discussion Paper Intl Food Policy Res Inst, 2019.
- 7 **Singh, Vartika**, and Sujata Ganguly. "Evaluation of India's Soil Health Card from User's Perspective." 2018.
- 8 **Singh, Vartika**, and Patrick Ward. "Challenges in implementing India's Aadhaar-enabled fertilizer management system." 2018.
- 9 **Singh, Vartika**, Patrick Ward, and Shweta Gupta. "Who are the entrepreneurs? A case for accelerated service economy for agriculture machinery in Odisha." 2018.

Select International Conferences

- 1 *Food Security in the Indo-Gangetic Basin*. Delivering for Nutrition in South Asia, 2025, Nepal.
- 2 *An inclusive agri-food systems transformation approach for India*. International Conference of Agricultural Economists (ICAE 2024), 2024, New Delhi.
- 3 *An inclusive agri-food systems transformation approach for India*. Delivering for Nutrition in South Asia, 2024, Sri Lanka.
- 4 *Evaluating Regional Diets against Global Recommendations for Sustainable Food System Transformation in India*. Royal Geographic Society -Annual International Conference 2024, 2024, London.
- 5 *A bottom-up approach to sustainable transformation: accounting for regional preferences in global environmental goals*. Tropentag, 2023, Berlin.
- 6 *An inclusive agri-food systems transformation approach for India*. CGIAR Gender Impact Platform Conference on From Research to Impact: Towards just and resilient agri-food systems, 2023, New Delhi.
- 7 *Dietary Transitions As Climate Mitigating Measures and Their Environmental Impacts in South Asia*. Agricultural & Applied Economics Association (AAEA), 2023, Online.
- 8 *The role of food systems in achieving India's sustainability targets: Analysis using integrated assessment modelling for India*. Agriculture, Nutrition, and Health (ANH) Academy, 2022, Online.
- 9 *Water Use and Crop Production in India: Our 2 Cents*. Washington State University, 2022, Seattle.
- 10 *Groundwater Conservation and Global Food Security: An exploratory assessment*. 2022, Sustain Valencia.
- 11 *Seeds, Water, and Markets to Increase Wheat Productivity in Bihar, India*. 31st International Conference of Agricultural Economists (ICAE), 2021, Online.

State Capacity Development

2014 onwards	Digital Data Collection I regularly conduct several sessions with Ministry of Agriculture and Ministry of Rural Development on digital data collection using SurveyCTO and CAPI.
2015-2017	Training of bureaucrats in India and Nepal Organized and led the training sessions of bureaucrats at the Lal Bahadur Shastri National Academy of Administration (LB-SNAA), and the Nepal Administrative Staff College (NASC), equipping civil servants with tools on impact evaluation and evidence-based policymaking.
2017-2019	Ministry of Agriculture and Farmer's Welfare Co-designed evaluation(s) with State Departments of Agriculture of Bihar, Odisha, Andhra Pradesh and Uttar Pradesh, to test and redesign of soil health cards, including machinery subsidies and Direct Benefit Transfer (DBT) schemes.
2017-present	Guest Faculty - Impact Evaluation . Annual Course on Corporate Social Responsibility organized by the Ministry of Corporate Affairs.
2021-present	Guest Faculty - OneHealth . Annual Course on Understanding Public Health Nutrition: Towards Policy and Action organized by CCDS, Emory University and IFPRI.
2012 onwards	Policy Stakeholder Engagement Over the years, I have conducted numerous stakeholder engagements with officials from Ministry of Fertilizers, Ministry of Rural Development, Niti Aayog, Comptroller and Auditor General of India and Ministry of Health on key policy priorities of the states.

Projects and Grants

2025	<ul style="list-style-type: none"> World Bank Secured funding from World Bank Central Asia team for scenario assessment of irrigation expansion in the Central Asian region. Report writing is currently in progress.
2024	<ul style="list-style-type: none"> Belmont Forum - Climate, Environment and Health Grant II Co-wrote this successful proposal NSF grant from Belmont Forum for 100,000 Euro for project called SOLVE - System adaptation for OneHealth under climate change for Vulnerable groups and Ecosystems. This project was designed to develop participatory pathways for resilient, healthy, prosperous, and equitable food and land systems under climate change. OECD Secured funding from OECD to develop future climate scenarios on groundwater use for global food baskets. Findings contributed to the flagship report of the Global Commission on the Economics of Water.
2023	<ul style="list-style-type: none"> FAO Secured funding from FAO to develop India country case study as part of their on annual flagship State of Food and Agriculture (SOFA 2024) report. Food Systems Economics Commission Scientific collaboration on this project with teams from PIK, Oxford University, Stockholm Resilience Centre and EAT to develop pathways for economics, social, climate and health scenarios for India. Results published in FSEC global report, India policy brief and multiple journal articles.
2019- present	<ul style="list-style-type: none"> FABLE Consortium Co-led activities for the India country team, in collaboration with organizations from 23 countries to develop the first suite of models to assess India's policy pathways within the agricultural, food and landuse sectors.
2012-2017	<ul style="list-style-type: none"> BMGF and USAID Co-led activities on Cereal Systems Initiative for South Asia, collaborative project between IFPRI, CIMMYT and IRRI - a decade long project partnership supporting empirical research in collaboration with state governments.

Awards and Associations

2019 – present	<ul style="list-style-type: none"> Guest Scientist, Potsdam Institute for Climate Impact Research
2023	<ul style="list-style-type: none"> NSF - Early Career Research Award, Awarded the competitive ECR grant (6000 USD) by Global to Local Analysis of Systems Sustainability (GLASSNET) program to pursue research and collaboration with Cornell University
2021-2023	<ul style="list-style-type: none"> Member of Advisory Board. Food, Agriculture, Biodiversity, Land-Use and Energy Consortium - across 23 countries
2024-present	<ul style="list-style-type: none"> Chairperson-Workplace Committee For IFPRI's South Asia Regional Office over 3 offices and more than 100 staff.
2018	<ul style="list-style-type: none"> Capacity Building Award IFPRI - for undertaking capacity building both within and outside the Institute.