

Saritha Sudharmma Vishwanathan

Current Address: Assistant Professor, Kyoto University (Katsura Campus)

Department of Urban Systems and Environmental Engineering, Kyoto, Japan

Languages: English (native), Gujarati (native), Hindi (native), Malayalam (intermediate)

Expertise: National Integrated Assessment Modelling, Energy and Climate Policies, Technology Transitions, Climate Justice, Policy and Governance

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PROFESSIONAL APPOINTMENTS

2023-Present *Assistant Professor*, Graduate School of Engineering, **Kyoto University, Japan**

2019-2023 *Postdoctoral Research Fellow*, Global Sustainability Integrated Assessment Lab, Social Systems Division. **National Institute for Environment Studies, Japan**

2019 *Guest Research Scholar*, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria (Research Exchange Fellow)

2018 *Postdoctoral Research Fellow*, Public Systems Group, Indian Institute of Management, Gujarat, India

EDUCATION

2018 **Indian Institute of Management –Ahmedabad**, Gujarat, India

Fellow Programme in Management (equivalent to **PhD** in Management, Major: Public Policy) **Area:** Public Systems Group

2007 **Georgia Institute of Technology**, Atlanta, Georgia, USA

Master of Engineering in Environmental Engineering

2005 **L.D. College of Engineering, Gujarat University**, Ahmedabad, Gujarat, India

Bachelor of Engineering in Environmental Engineering

AWARD

2025 [Award](#) for **Extraordinary Contributions to the field of Integrated Assessment Modeling**

NOMINATION

2025 [IPCC AR7 WGIII Chapter 14](#) – Integration and Interactions between systems and sectors (nominated by the Government of India, selected by IPCC AR7 Bureau)

2023 **IPCC AR6 Use of Scenarios Workshop** (nominated by the Government of India)

2023 **UNFCCC Expert Review Team** to review Finland’s National Communications 7/Biennial Report 3

2021 **UNFCCC Roster of Experts** (Nominated by the Government of India)

Contribute to the processes mandated by the COP, CMP, CMA, and the subsidiary bodies of UNFCCC. Completed and passed UNFCCC Courses A, B1, C (NDC Tracking) and D (FTC). Review of GHG inventories, mitigation and adaptation strategies, technologies and financial resources.

LEADERSHIP and MEMBERSHIP (most recent)

- 2025-Present** *Co-Lead*, [Development of Socio-Economic Projections](#) (DSPs) Expression of Interest Call under NEWPATHWAYS
- 2025-Present** *Member*, Just Transitions Model Intercomparison Project (JustMIP)
- 2024-Present** *Advisory Board Member*, Steering Committee for the Climate Scenario Compass Initiative (CSCI)
- 2023-Present** *Co-Chair, Scientific Working Group on National scenarios*, Integrated Assessment Modelling Consortium (IAMC) (*100+ teams representing 30+ countries, 250+ researchers*)
- 2023-Present** *Co-Lead, India Models and Scenarios* Intercomparison Research (*15+ teams*)
- 2023-Present** *Member*, High end/Medium Scenarios Development TaskForce, ScenarioMIP
- 2021-2023** *Regional Coordinator (Asia and Africa)*, Scientific Working Group on National scenarios, Integrated Assessment Modelling Consortium (IAMC)
- 2019- Present** *Member*, Scientific Steering Committee At Large (India, IIMA representative), IAMC, Co-Chair and reviewer of technical sessions in IAMC Annual Meetings
- 2018- Present** *Member*, India Energy Modelling Forum (NITI Ayog and MOEFCC)
- 2016-2017** *Member*, International Society of Sustainability Professionals (ISSP)

INVITED EDITOR

- 2026** Editorial Board, Carbon Management (tentative)
- 2026** Guest Editor Co-lead, Energy and Climate Change (SI: *National Scenarios*)
- 2024** Guest Editor, Energy and Climate Change (SI on *Energy Transitions towards Net Zero India*)

INVITED AUTHORSHIP and REVIEWER

- 2025** *Contributing Author*, DDP Annual Report 2025
- 2025** *Contributing Author*, DDP Country Report on India 2025
- 2025** *Lead Author*, India's NDC and Long-Term transformations 2025
- 2024** *Contributing Author*, Chapter 3 and Chapter 4, UNEP GAP Report 2024
- 2024** *Contributing Author*, India Case Study. Making it happen: National pathways to Net Zero. DDP Annual Report 2024. IDDRI.
- 2024** *Contributing Author*, NDC-LT-LEDS Alignment Guide: Aligning short-term plans with long-term ambitions. IDDRI.
- 2023-** *Review Editor*, Solution pathways for transformation of energy systems, Global Environment Outlook 7 (GEO-7)
- 2025** Environment Outlook 7 (GEO-7)
- 2023** *Contributing Author*, Chapter 5, UNEP GAP Report 2023
- 2022** *Contributing Author*, Chapter 3, UNEP GAP Report 2022

TEACHING

- 2024- Present** *Co-Faculty*, Atmospheric and Global Environmental Engineering, Kyoto University
- 2023** *Lecturer*, National Modelling and scenarios, ENGAGE-NAVIGATE Summer School, EU
- 2018-** *Visiting Faculty*, Adani Institute of Management, Ahmedabad, GUJARAT, INDIA
- 2019** *MBA Courses: Global Carbon Finance Course, Managing Energy Businesses Course*

PROJECTS [Selected National and International]

- 2025-Present JUSTPATH-** Support for mitigation modelling capacity for just energy transition
- 2025-Present NEW PATHWAYS** (Co-Lead, Work Package 5 on National Pathways) (Horizon EU)
- 2024-Present 2050isNOW** -Aligning climate action with long-term climate and development goals (India representative, IKI-WRI Project)
- 2024-Present Japan Science and Technology (JST)** Social Science Research
- 2023-Present Sumitomo** Electric Industries Group CSR Foundation
- 2023-Present COMMITTED-**Climate policy assessment and Mitigation Modeling to Integrate National and global Transition pathways for Environmental-friendly Development
- 2021-2024 NDC ASPECTS** Project (India representative, Horizon2020 Project)
- 2021-2024 IMAGINE-** Insights from Modelling and Analysis for Global Interactions and National Engagement
- 2021-2022 PSA-** Synchronizing energy transitions towards possible Net-Zero for India: Affordable and clean energy for All
- 2019-2023** Assessment of further reduction of GHG emissions in Asian countries and benefit to Japan by assisting their reduction efforts (NIES, Japan)
- 2019-2023** Short-Lived Climate Forcers: Mitigation scenarios (NIES, Japan)
- 2019-2023** Development of global scenarios for effectiveness evaluation of the Minamata Convention on Mercury (NIES, Japan)
- 2019-2023 ENGAGE** - Exploring National and Global Actions to reduce Greenhouse gas Emissions
- 2018-2021 Deep Decarbonization Pathways BIICS-** Transformative Climate Action after Paris
- 2017-2018 Coal Transitions** -Research and Dialogue on the Future of Coal
- 2016-2020 CDLINKS** - Levering International Networks and Knowledge Sharing

PUBLICATIONS

Peer-reviewed Articles (Selected)

- 2026** Danneaux, A., Gallic, T., Lefèvre, J., **Sudharmma Vishwanathan, S.**, He, G. (2026). [Futures for coal workers: Productivity and transition ambitions drive subnational vulnerability disparities in China and India.](#) *Global Environmental Change*.
- 2026** Pachauri, S., Brutschin, E., Gidden, M., Hasegawa, T., Hejazi, M., Jiang, K., Kikstra, J., Krey, V., Lamb, W., Mintz-Woo, K., Nauels, A., Pelz, S., Rogelj, J., Roy, J., Schaeffer, R., Scheifinger, K., Sokona, Y., Tavoni, M., van Ruijven, B., Vinca, A., **Sudharmma Vishwanathan, S.**, Zimm, C., and Riahi, K. (2026). [Advancing representations of equity and justice in climate mitigation futures.](#) *PLOS Climate*.
- 2026** Daly, M., Pye, S., Bataille, C., Akute, M., Bergman, M., Bravo, G., Bui, H., Buira, D.,..., **Sudharmma Vishwanathan, S.**, and Waisman, H. (2026). [Energy modelling innovations to support development and clean energy transitions in Low and Middle Income Countries.](#) *Nature Energy*.

- 2026 Briand, Y., Svensson, J., Lepin, C., Waisman, H., Bataille, C., ..., **Sudharmma Vishwanathan, S.**, Tatham, J., Teng, F., Tovilla, J., & Wills, W. (2026). [Net-zero compatible development pathways in Argentina, Brazil, China, India, Indonesia, Mexico and South Africa: lessons for short-term actions](#). *Climate Policy*.
- 2026 Kamsela, D., Fujimori, S., Hasegawa, T., and **Sudharmma Vishwanathan, S.** (2026). [Global Soil Organic Carbon Sequestration Potential Under Sustainable Food Systems and Climate Mitigation](#). *Environmental Research Letters*.
- 2025 **Vishwanathan, S.S.**, Bataille, C., Gunfaus, M., Nogueira, E., Cunha, S., Rovere, E., Wrs, U., Patange, O., Garg, A., McCall, B., and Trillop, H. (2025). [Power Sector Transformation in emerging economies](#). *Climate Policy*.
- 2025 Singh, U., **Vishwanathan, S.S.**, Garg, A, Singh, A. K., Iyer, S.H. (2025). [Socio-technical feasibility of coal transitions in India: Results from stakeholder interviews](#), *Energy and Climate Change*, 6 (100188).
- 2025 Fujimori, S., Krey, V., Riahi, K., Sugiyama, M., Edmonds, J., Guivarch, C., Paltsev, S., Rose, S., Schaeffer, R., Tavoni, M., **Sudharmma Vishwanathan, S.**, van Vuuren, D., Weitzel, M. (2025). [Open and transparent model intercomparison platform for scenarios generated by Integrated Assessment Models](#).
- 2025 Konig, R., Preggera, T., Kronshage, S., Jochem, P., McCall, B., Holtze, G., **Vishwanathan, S. S.**, Fragkos, P., Fei, T., Smith, S., Teskeim Sven. (2025). [How to consider feasibility aspects of transformation pathways for the industry sector -implications for energy systems modelling](#). *Energy Strategy Reviews*.
- 2025 Zhao, S., Fujimori, S., Min, J., Kikstra, J.S., Hasegawa, T., Oshiro, K., **Vishwanathan, S.S.** (2025). [The multi-faceted global poverty and income inequality landscape in a decarbonizing world](#), *Cell Reports Sustainability*, 100487.
- 2025 Van Vuuren, D., O'Neill, B., Tebaldi, C., Friedlingstein, P., Hasegawa, T., Riahi, K., ... and **Vishwanathan, S.S.** (2025). The Scenario Model Intercomparison Project for CMIP7 (ScenarioMIP-CMIP7). *Copernicus – EGU sphere*.
- 2024 Garg, A., Avashia, V., and **Vishwanathan, S. S.** (2024). Net-Zero and Climate Equity under National and Subnational perspectives. Roadmap: [India's pathways to Net Zero by 2070: Status, Challenges, and Way forward](#). *Environmental Research Letters*, 19, 112501.
- 2024 Bilici, S., Holtz, G., Jülich, A., König, R., Li, Z., Trollip, H., ... **Vishwanathan, S. S.**,...and Meurer, A. (2024). [Global trade of green iron as a game changer for a near-zero global steel industry? - A scenario-based assessment of regionalized impacts](#). *Energy and Climate Change*, 5, 100161.
- 2024 Svensson, J., Dubeux, C., Boer, R., **Vishwanathan, S.S.**, ... and Rovere, E. (2024). [The role of AFOLU in national decarbonization: a comparative analysis of pathways in Brazil, India and Indonesia](#). *Climate Policy*.
- 2024 Xia-Bauer, C., Gokarakonda, S., Guo, S., ... S., Maheshwari, J. R., and **Vishwanathan, S. S.** (2024). [Comparative analysis of residential building decarbonization policies in major economies: Insights from the EU, China, and India](#). *Energy Efficiency*, 17(5), 46.
- 2023 **Vishwanathan, S.S.**, Hanaoka, T. and Garg, A. (2023). [Co-benefits and Tradeoffs from Decarbonization strategies on Mercury emissions in India](#). *Environment, Science and Technology*.

- 2023** Vishwanathan, S.S., Fragkos, P., and Garg, A. (2023). [Assessing enhanced NDC and climate compatible development pathways for India](#). *Energy Strategy Reviews*, 49 (10152).
- 2023** Bataille, C., Trollip, H., McCall, B., Garg, A., Vishwanathan, S.S.,... and Rovere, E. (2023). [Transitions in steel and cement industry in Brazil, India, Indonesia, and South Africa](#). *Climate Policy*.
- 2023** Jäger, J., Brutschin, E., Pianta, S., Omann, I., Kammerlander, M., Vishwanathan, S.S.,... and van Ruijven, B. (2023). [Stakeholder engagement and decarbonization pathways: Meeting the challenges of the COVID-19 pandemic](#). *Frontiers in Sustainability*, 3:1063719.
- 2022** Hermwille, L. Lechtenböhmer, S., Åhman, M., van Asselt, H., Bataille, C.,... and Vishwanathan, S. S. (2022). [A Climate Club to Decarbonize the Global Steel Industry](#). *Nat. Clim. Change*.
- 2021** Vishwanathan, S.S., Garg, A., Tiwari, V., Kapshe, M. and Nag, T. (2021). [SDG implications of water-energy systems transitions in India under NDC, 2 °C and well below 2 °C](#). *Environmental Research Letters*.
- 2020** Vishwanathan, S.S., and Garg, A. (2020). [Energy system transformation to meet INDC, 2°C and well below 2°C targets for India](#). *Climatic Change*.
- 2020** Malik, A., Bertram, C., Després, J., Emmerling, J., Fujimori, S., Garg, A.,..., Vishwanathan, S.S., and Vrontisi, Z. (2020). [Reducing stranded assets through early action in the Indian power sector](#). *Environmental Research Letters*, 15 (9).
- 2020** van den Berg, N. J., van Soest, H. L., Hof, A. F., den Elzen, ..., Vishwanathan, S. S., Vrontisi, Z, and Blok, K. (2020). [Implications of various effort-sharing approaches for national carbon budgets and emission pathways](#). *Climatic Change*, 1-18.
- 2020** Roelfsema, M., van Soest, H. L., Harmsen, M., van Vuuren, D. P., Bertram, C., den Elzen, M.,... Vishwanathan, S. S. (2020). [Taking stock of climate policies: evaluation of national policies in the context of the Paris Agreement climate goals](#). *Nature Sustainability*.
- 2019** Gupta, D., Ghersi, F., Vishwanathan, S.S. and Garg, A. (2019). [Macroeconomic assessment of India's development and mitigation pathways](#). Special issue on Development and mitigation pathways. *Climate Policy*.
- 2019** Gupta, D., Ghersi, F., Vishwanathan, S.S. and Garg, A. (2019). [Achieving sustainable development in India along the low carbon pathways: Macroeconomic assessment](#). *World Development*, 123(C).
- 2018** Krey, V., Guo, F., Kolp, P., Zhou, W., Schaeffer, R., Aleluia Reis, L., Awasthy, A., Bertram, C., Drouet, L., Fragkos, P., Fujimori, S., Garg, A... Shoai-Tehrani, B., Vishwanathan, S.S., and van Vuuren, D. (2018). [Looking under the hood: A comparison of techno-economic assumptions across national and global integrated assessment models \(IAMs\)](#). *Energy*.
- 2018** Fragkos, P., Fragkiadakis, K. Paroussos, L., Pierfederici, R., Vishwanathan, S.S., Köberle, A.C., Iyer, G., China-men, H., and Oshiro, K. (2018). [Integrated analysis of energy and economic impacts of NDCs at the national and global level](#). *Energy Policy*, 118, 462-473.
- 2018** Vishwanathan, S.S., Fragkos, P., Fragkiadakis, K., Paroussos, L., and Garg, A. (2018). [Energy system transitions and macroeconomic assessment of the Indian building sector](#). *Building Research & Information*, 47(1), 38-55. Special Issue on Energy and Climate Change Solutions-India's Building Stock.
- 2018** Vishwanathan, S.S., Garg, A., Tiwari, V., and Shukla, P.R. (2018). [India in 2 °C and well below 2 °C worlds: Opportunities and challenges](#). *Carbon Management*, 1 (21).

Policy Briefs (Selected)

- 2023** Vishwanathan, S.S., Rafaj, P., Garg, A., Kiesewetter, G., Schopp, W. and Krey, V. (2023). [Impact on Air Pollution in India under NDC and low carbon scenarios](#). ENGAGE policy brief.
- 2021** Vishwanathan, S.S., Fragkos, P., and Garg, A. (2021). Assessing NDC and climate compatible development pathways for India. CCG Policy brief.
- 2017** Vishwanathan, S.S., and Garg, A. (2017). [India, Policy implications of a low-carbon growth](#), in Inside NDCs: National Strategies in the Light of the Paris Agreement, IDDRI and Climate Strategies.

Technical reports/Books/Book Chapters (Selected)

- 2025** Avashia, V., Maheshwari, J., Vishwanathan, S.S. and Garg, A. DDP Annual Report-India.
- 2024** Vishwanathan, S.S. (2024). Transition Pathways for India. NDC ASPECTS report.
- 2024** Garg A., Patange, O., Sudharmma Vishwanathan, S., Nag, T., Singh, U., and Avashia V., (2024). [Synchronizing energy transitions toward possible Net Zero for India: Affordable and clean energy for all](#). Office of the Principle Scientific Advisor (PSA), GoI and NPCIL.
- 2021** Garg, A., Vishwanathan, S.S., Gupta, D., Chaturvedi, R., Avashia, V., and Patange, O. (2021). [Key Policy Lessons from India's DDP Pathways](#). DDP BIICS, IDDRI.
- 2018** Vishwanathan, S. S., Garg, A. and Tiwari, V. (2018). *Coal Transitions in India: Assessing India's Energy Transition Options*. IDDRI and Climate Strategies. ISBN: 978-81-920800-8-6.
- 2017** Vishwanathan, S.S., Garg, A., Tiwari, V., Kankal, B., Kapashe, M., Nag, T. (2017). [Enhancing Energy efficiency in India: Assessment of sectoral potentials](#). Copenhagen: Copenhagen Centre on Energy Efficiency, UNEP DTU Partnership. ISBN: 978-87- 93458-13- 0.

INVITATIONS/OUTREACH EVENTS/OPINION PIECES (Selected)

- 2026** EU-China Modelling Comparison and NDC Implementation, Beijing, China
- 2025** New Activities - Development focussed socio-economic projections and National Scenarios, The Climate-Development Nexus-Equity, Development, and Finance in Net-Zero Pathways, UNFCCC COP30 Side event, Belem, Brazil (online)
- 2025** [IAMC Scientific Working Group on National Scenarios](#) – Current Status
- 2024** EU Commission - *Just Transitions for India*
- 2024** [For clear air, go nuclear](#). Opinion piece in The Economic Times (India).
- 2024** China-India New Economy Dialogue: Digital and Green Development, CICC 2024 Forum
- 2024** *Can India's economy grow in a greener way than China's?* Austrian Media and podcast.
- 2023** Jefferies (Global) Investor Discussion [*Energy Transitions in India under Net Zero 2070*]
- 2021** UNFCCC COP26 side events, COP26: Government of India – Position on climate actions
- 2021** Asia Pacific Climate Week, India's Deep Decarbonization Pathways
- 2021** EU-Business (coordinated by IDDRI), India's Deep Decarbonization Pathways and Businesses