

## Saritha Sudharma 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:** Modelling, Energy and Climate Policies, Technology Transitions, Climate Justice

**Email:** vishwanathan.saritha.5t@kyoto-u.ac.jp

### 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*

### NOMINATION

**2025** **IPCC AR7 WGIII Chapter 14** – Integration and Interactions between systems and sectors (nominated by the Government of India)

**2025** **UNFCCC LULUCF expert** for REDD+ to assess Forest Reference Levels

**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).

- Technical review of GHG inventories and other annual information reported by Annex I and Non-Annex I Parties
- Review of methodologies and tools to assess climate change impacts and adaptation
- Review of information related to technologies, financial resources, development, and transfer of technologies

## LEADERSHIP and MEMBERSHIP (most recent)

- 2025-Present** *Co-Lead*, Development of Socio-Economic Projections (DSPs) 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) (*90+ 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*) (tentative)
- 2025** Guest Editor, Energy and Climate Change (SI on *Energy Transitions towards Net Zero India*)

## 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)
- 2021-2024** **NDC ASPECTS** Project (India representative, Horizon2020 Project)
- 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)

## INVITED AUTHORSHIP and REVIEWER

- 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)
- 2023 Contributing Author**, Chapter 5, UNEP GAP Report 2023
- 2022 Contributing Author**, Chapter 3, UNEP GAP Report 2022

## PUBLICATIONS

### Peer-reviewed Articles (Selected)

- 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 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., Gherzi, 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., Gherzi, 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)

- 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.
- 2021** Garg, A., and Vishwanathan, S.S. (2021). India: Post Paris Climate Policies in *Climate ambition beyond emission numbers – Taking Stock of progress by looking inside countries and reports*. 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.
- 2018** Vishwanathan, S.S., Garg, A. and Tiwari, V. (2018). *Water use projections in industry sector under different climate change regimes*. In Mishra, V., and Bhatt, J.R. (Eds.), *Climate Change and Water Resources in India* (pp 147-167). New Delhi: MOEFCC, GOI. ISBN: 978-81-933131-6-9.
- 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 (Selected)

- 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