

# Aman Malik

## Curriculum Vitae

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### Profile

- Areas of expertise
- **Energy System Modelling:** Scenario building and net-zero pathways development using models like GCAM and REMIND.
  - **Carbon Markets & Policy:** Modelling-based research on India's Carbon Credit Trading Scheme (CCTS) and emission trading frameworks.
  - **Transition Risk:** Climate-related financial risk assessments for the financial sector and institutional actors.
  - **Sub-national Policy:** Developing state-level energy models and net-zero strategies (e.g., Gujarat and Uttarakhand).
- Interests
- Climate change mitigation policy; Indian energy policy; modelling energy and climate policy scenarios; employment implications of mitigation; climate-related financial risk; carbon dioxide removal.

### Education

- 10/2017–11/2021 **Dr. rer. nat.**, *Technical University of Berlin and Potsdam Institute for Climate Impact Research*, Berlin and Potsdam, Germany
- Title: Barriers to power sector decarbonisation in India
- 10/2014–05/2017 **Master of Science in Integrated Climate System Sciences**, *University of Hamburg*, Hamburg, Germany
- Specialised in climate economics and carbon dioxide removal
- Thesis Title: Kinetics of olivine dissolution in column experiments
- Grade: 1.24 (*excellent*)
- 2009–2013 **Bachelor of Technology in Chemical Engineering**, *Guru Gobind Singh Indraprastha University*, New Delhi, India
- First Division, (72.4%)

### Work Experience

- 06/2023–02/2026 **Programme Lead**, *Council on Energy, Environment and Water*, New Delhi, India
- Low Carbon Economy Team
- 10/2022–05/2023 **Consultant**, *Council on Energy, Environment and Water*, New Delhi, India
- 07/2022–12/2024 **Guest Scientist**, *Potsdam Institute for Climate Impact Research*, Potsdam, Germany
- 01/2022–06/2022 **Postdoctoral Researcher**, *Potsdam Institute for Climate Impact Research*, Potsdam, Germany
- 10/2017–12/2021 **Researcher**, *Potsdam Institute for Climate Impact Research*, Potsdam, Germany
- Group of Energy Systems, Research Department III - Transformation Pathways
- 06/2017–08/2017 **Consultant**, (*Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ)*), New Delhi, India
- 10/2016–12/2016 **Student Assistant**, *Biogeochemistry Laboratory, Institute of Geology, University of Hamburg*, Hamburg, Germany

- 05/2016–09/2016 **Student Assistant**, *Climate Science and Policy Team, Climate Analytics*, Berlin, Germany  
Development of SIAMESE — a model to emulate Integrated Assessment Models
- 02/2015–03/2016 **Student Assistant**, *Biogeochemistry Laboratory, Institute of Geology, University of Hamburg*, Hamburg, Germany

## Peer-reviewed Publications

- 2025 P. Das and **A. Malik**. “Challenges to Deep-Decarbonization to Achieve Net Zero for India: A Review”. *Strategic Analysis*.
- Under Rev. K. Agarwal, **A. Malik**, R. Verma, V. Chaturvedi. “The Criticality of Country-Specific Scenarios to Inform Transition Risk Assessment for the Financial Sector: A case study for India”. *Energy and Climate Change*.
- 2024 **A. Malik**, V. Chaturvedi, M. Sandhani, P. Das, C. Arora, N. Singh, R.Y. Cui, et al. “Implications of an emission trading scheme for India’s net-zero strategy: a modelling-based assessment”. *Environmental Research Letters*.
- 2022 T. Amann, J. Hartmann, R. Hellmann, E.T. Pedrosa, **A. Malik**. “Enhanced weathering potentials—the role of in situ CO<sub>2</sub> and grain size distribution”. *Frontiers in Climate*.
- 2022 **A. Malik** and C. Bertram. “Solar energy as an early just transition opportunity for coal-bearing states in India”. *Environmental Research Letters*.
- 2022 **A. Malik**. “Barriers to power sector decarbonisation in India”. *PQDT Global* (Doctoral Dissertation).
- 2022 HL. van Soest... **A. Malik**, et al. “Global roll-out of comprehensive policy measures may aid in bridging emissions gap”. *Nature Communications*.
- 2021 C. Bertram... **A. Malik**, et al. “Energy system developments and investments in the decisive decade for the Paris Agreement goals”. *Environmental Research Letters*.
- 2021 L. Baumstark... **A. Malik**, et al. “REMIND2.1: Transformation and innovation dynamics of the energy–economic system within climate and sustainability limits”. *Geoscientific Model Development*.
- 2021 **A. Malik**, C. Bertram, E. Kriegler, G. Luderer. “Climate policy accelerates structural changes in energy employment”. *Energy Policy*.
- 2021 C. Bertram... **A. Malik**, et al. “COVID-19-induced low power demand and market forces starkly reduce CO<sub>2</sub> emissions”. *Nature Climate Change*.
- 2020 **A. Malik**, C. Bertram, J. Després, J. Emmerling, S. Fujimori, A. Garg, et al. “Reducing stranded assets through early action in the Indian power sector”. *Environmental Research Letters*.
- 2020 H. Wang, W. Chen, C. Bertram, **A. Malik**, E. Kriegler, G. Luderer, et al. “Early transformation of the Chinese power sector to avoid additional coal lock-in”. *Environmental Research Letters*.
- 2019 F. Sferra, M. Krapp, N. Roming, M. Schaeffer, **A. Malik**, B. Hare, R. Brecha. “Towards optimal 1.5°C and 2°C emission pathways for individual countries: A Finland case study”. *Energy Policy*.

## Reports/Book-chapters

- Nov 2025 CEEW, Ahmedabad University, and UNOPS. “Roadmap for a net zero power sector in Gujarat”.

- Apr 2025 CEEW, Ahmedabad University, and UNOPS. "Assessment of net zero scenarios for Gujarat".
- Dec 2025 CEEW. "Assessment of net zero strategies for Uttarakhand" (Under review).
- Dec 2024 P Das, ZA Khan, ... A. Malik. "Supporting climate policy for Indian states: Learnings from long-term modelling". *CEEW Issue Brief*

## Working Papers & Preprints

- 2026 M. George, P. Das, V. Chaturvedi, **A. Malik**, et al. "Toward Next-Generation Climate Modeling in India: Lessons and Pathways for Action". *SSRN Working Paper*. doi:10.2139/ssrn.6197918

## Policy Blogs

- 2026 **A. Malik**, S. Elango. "Why India must plan for AI data centres' energy and water footprint". *CEEW Blog*.
- 2023 **A. Malik**, N. Shukla. "How Energy System Modelling Tools Can Inform Design of India's Carbon Emission Trading Scheme". *CEEW Blog*.

## Op-eds & Media

- 2024 **A. Malik**, V. Chaturvedi. "4 Factors to Influence Our Emissions Trading System". *New Indian Express*.
- 2024 **A. Malik**, P. Das. "Navigating India's Decarbonisation Challenges". *Moneycontrol*.

## Positions, Awards, Honors and Recognitions

- 2024–2026 **Part of CEEW's team**, *Expert Committee on Reserve Bank's Climate-related Information System*
- 2023 **IOP Trusted Reviewer**, *In recognition of exceptionally high level of peer review consistency*, IOP Publishing
- 11/2023 **Full Scholarship**, *Integrated Assessment Modelling Consortium Annual Conference*, Venice, Italy  
Fully-funded scholarship from EU DG CLIMA to present paper on carbon markets
- 12/2019–03/2020 **Guest exchange scholarship**, *COMMIT project*, PBL, Netherlands  
Fully funded 3-month long exchange at TERI, New Delhi, India
- 06/2019–07/2019 **Participant**, *CD-LINKS Summer School*, Venice, Italy  
Fully-funded attendance at a week-long summer school on Integrated Assessment Models
- 04–09/2016 **Merit scholarship worth 3250€**, *University of Hamburg, Germany*
- 06–08/2013 **Summer Fellowship**, *Jawaharlal Nehru Center for Advanced Scientific Research*, Bangalore, India
- 2012–2013 **Bursary of £1250**, *University of Oxford, Department of Continuing Education*  
Scholarship for online course titled 'Constructing and Analyzing High Resolution Climate Scenarios'
- 02/2011 **Expedition Grant worth US\$ 8500**, *for the 'Students on Ice' Antarctic University Expedition (uantarctic.org)*  
Grants provided by Indraprastha University, Delhi and National Center for Antarctic and Ocean Research, Goa
- 2009 **Certificate of Merit**, *Central Board of Secondary Education*  
For outstanding academic performance and for being among the 0.1% of all successful candidates in Physics in the All India Secondary School Examination

2009 **Full Scholarship**, *GIV Engineering Program*, University of Vermont  
Fully funded scholarship to attend an engineering summer school

### Review work

Reviewer for the following journals:

Nature

Environmental Research Letters: Climate

Climate Policy

Energy Policy

Climate Economics

Energy Research and Social Science

Environmental Research Letters

### Computer Skills

proficient MS Office, R

good Python, QGIS

basic GAMS

### Languages

Hindi **native**

English **near-native fluency**

German **very good, level C1**

### Talks, Lecture, Panel discussions

- 04/2026 **Guest lecture**, *Economics and Geopolitics of Energy*, WWF-India and OP Jindal University, Students of LL.M. ELECC 2025
- 12/2025 **Panelist**, *Session on carbon removal in Article 6*, CO2 Forward Carbon Removal Summit, Carbon Removal Alliance of India  
Delhi
- 10/2025 **Guest lecture**, *Economics of Climate Change*, WWF-India and OP Jindal University, Students of LL.M. ELECC 2025-2026
- 10/2025 **Moderator**, *Panel discussion on Decarbonisation of Economy – Leveraging Carbon Credits*, Viksit Gujarat Regional Summit, Ganpat University  
Mehsana
- 08/2025 **Guest lecture**, *Energy Transition and Decarbonisation*, IOCL Senior Management Programme with IIM Calcutta
- 07/2025 **Speaker**, *India Emissions and Net Zero*, Indian Energy Forum, New Delhi
- 05/2025 **Guest lecture**, *Decision maker under uncertainty: Insights from modelling*, National Thermal Power Corporation
- 03/2025 **Panelist**, *Panelist at Sustainable Futures Collaborative's Tufts Climate Panel Discussion*, New Delhi
- 01/2025 **Guest lecture**, *Introduction to Modelling*, IIT Roorkee
- 09/2024 **Speaker**, *Conference on Joint Response to Climate Crisis*, Seoul, South Korea  
Sungkyunkwan University

- 09/2024 **Speaker**, *Lecture on Climate Change at the Rajya Sabha (Upper House) for Parliamentary Interns*, New Delhi, India  
To interns of Members of Parliament
- 09/2024 **Speaker**, *IIT Delhi workshop on Energy and Well-being – Indian Case Study*, New Delhi, India  
IIT Delhi
- 09/2024 **Speaker**, *Surya Foundation Think Tank Strengthening Some Key Areas for Viksit Bharat 2047*, New Delhi
- 08/2024 **Speaker and Panelist**, *Carbon Markets in India*, New Delhi, India  
Centre for Social and Economic Progress
- 08/2024 **Speaker**, *State Dialogue on Accelerating Energy Efficiency in Gujarat*, Vadodara, India  
[Watch Video]
- 02/2024 **Guest speaker**, *Webinar on Role of ETS in India's Net-Zero targets*, Delhi, India  
Organised by the Carbon Markets Association of India
- 02/2024 **Expert speaker**, *Accelerating the Just Transition of MSMEs: Capacity Development of Policymakers Program*, Lucknow, India  
Organised by School of Public Policy and UNDP
- 01/2024 **Panelist**, *Impact of Net-Zero Transition Policies on Clean Jobs, Skilling Needs and Interstate Migration*, New Delhi, India  
Event organised by ICRIER — [Watch Video]
- 01/2024 **Speaker**, *Implications of India's ETS on its net-zero target*, New Delhi, India  
Niti Aayog
- 11/2023 **Oral presentation**, *Integrated Assessment Modelling Consortium*, Venice, Italy  
Role of ETS in India's Net-zero targets: A modelling-based assessment
- 03/2022 **Defense presentation**, *Barriers to power sector decarbonisation in India*, TU Berlin, Germany
- 12/2020 **Oral presentation**, *Integrated Assessment Modelling Consortium*, Online  
Assumptions on employment factor approach in energy scenarios  
Aman Malik and Christoph Bertram
- 09/2020 **Expert Panel**, *Climate Action and Renewable Energy in context of a Green Recovery*, Africa–EU Climate Partnership, Online
- 07/2019 **Presentation**, *Preventing stranded assets and empowering renewables*, CD-LINKS Summer School, Venice  
Italy
- 11/2018 **Poster presentation**, *Integrated Assessment Modelling Consortium*, Seville, Spain  
'Not (yet) another coal story: Power-sector lock-ins in India - perspective from national and global models'  
Aman Malik and Christoph Bertram