

Mukesh K. Gupta

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PROFILE SUMMARY: Energy and Natural resource management with specialized experience in the following fields: Climate Change and Development; Low Carbon Growth Strategies using scenario analysis; Urban sustainability; Analysis of Multiple Impacts of Energy Efficiency; Sustainability science; Environmental science and policymaking; Systems Thinking & Complexity; Energy and Sustainability Legislative & Policy Monitoring, dissemination, analysis & communication

EDUCATION

Ph.D. in Environmental Sciences and Policy (2011 - 2017), Environmental Sciences and Policy Department, Central European University, Budapest, Hungary

(Ph.D. Dissertation: 'Clean and Sustainable Energy Systems in Slums Transformation' - to estimate the energy savings and carbon dioxide reduction potential of slum households in sub-Saharan Africa and South Asia through utilization of cost effective and efficient technologies in an efficient scenario against the reference scenario in 2040)

Master of Art in Environmental Sciences and Policy (2005 – 2007), International Development, Community and Environment (IDCE), **Clark University**, Worcester, MA, USA

Master of Science (Technology) in Environment Management (1998 – 2000), Institute of Environment Management & Plant Sciences (IEMPS), **Vikram University**, Ujjain, MP, India

Bachelor of Science (Biology) (1995 – 1998), Government Autonomous PG College, **A.P.S. University**, Satna, MP, India

WORK EXPERIENCE

Aug 2017 -

Faculty, Environmental Sciences

Asian University for Women (AUW), Chittagong, Bangladesh

- Teaching environmental science courses: i) Global Climate Change, ii) Energy and the Environment, iii) Environmental Challenges in Asia, iv) Sustainability Science, v) Intro to Environmental Sciences, vi) Environmental Policy, vii) Environmental Management, viii) Senior Seminar/thesis
- Students research projects and senior thesis supervision, pursuing scholarly research, and providing university service on academic committees.

Jun 2016 – Jul 2017

Independent sustainability researcher & consultant

- Worked as LEDS project evaluator for 'Support for Low Emission Development in South East Europe (SLED)' project with the Center for Climate Change and Sustainable Energy Policy at the Central European University (3CSEP-CEU), Budapest. I was responsible for the data analysis and documentation for the project evaluation. I also collected case studies, provided a review of the recommended policies, and implemented online surveys.

- Part of the 3CSEP-CEU team to develop H2020 proposal calls as 'EU-China cooperation on sustainable urbanization' on a theme 'Fostering Sustainable Neighbourhood Regeneration' and AFFINITY (Actions For current and Future low carbon Innovation Transitions policy).
- I helped manage and guide the 2017 'Vulnerability Reduction Credits' (VRCs™) Framework review and rollout process which has been developed by The Higher Ground Foundation for qualifying projects to earn VRCs™.

Jan 2016 – June 2016

Solutions Analyst

Schneider Electric - Energy and Sustainability Services, Budapest

- Energy markets consultancy, projects input and analytics.
- EU Energy and Sustainability Legislative & Policy Monitoring
- CleanTech consultancy support (Consumer Renewable Energy Policy and strategy)

Jun 2015 – Dec 2015

Sustainability Analyst

Schneider Electric - Energy and Sustainability Services, Budapest

- Helped meet compliance for clients for the European Union Energy Efficiency Directives' (EED) mandatory energy audits program.

Apr 2015 – Jun 2015

Researcher

ABUD Budapest, Hungary

- Analyzed and identified the most important economic, social and environmental multiple benefits of energy efficiency actions, their interrelations and dependencies on technical measures and other context factors (sectors, countries, policy frameworks) for a Horizon 2020 project.

August 2012 – June 2013

Instructor & Mentor - Environmental Sciences and Policy

Roma Graduate Preparation Program, Central European University, Budapest, Hungary

- Taught 'An Introduction to Environmental Sciences' course to students of Roma Graduate Preparation Program
- Conducted one-on-one consultations with students
- Periodical assessment and evaluation of students' progress
- Graded exams, presentations and term papers
- Students were successfully admitted to their chosen master's programs

Sep 2010 – May 2011

Climate Change and Energy Fellow - India

Energy and Climate Program, Worldwatch Institute, USA

- Researched background documents on Indian climate and energy policy, and summarizing governmental documents.
- Provided assistance for the organization of "Strengthening India's Low Carbon Growth Strategy" workshops in New Delhi.
- Met with key policy makers of India, critical in determining India's low carbon path.

Aug 2007 – May 2010

Research Assistant

Division of Resource Management, Davis College, West Virginia University, Morgantown, WV, USA

- Calculated incentive levels required to render forestry land use economically profitable for landowners from payment based on carbon volume.
- Estimated carbon sequestration rates on reclaimed mine lands planted with trees for different time horizons.

- Calculated carbon sequestration potential through reforestation of mine lands for a seven state region of the Midwest Regional Carbon Sequestration Project (MRCSP).
- Estimated reclamation costs of reforesting mine lands for a seven state region of the MRCSP.

Nov 2002 – Feb 2005

Project Manager and Field Organizer

Consumer Unity and Trust Society, Center for Human Development (CUTS-CHD), Chittorgarh, Rajasthan, India

- Encouraged appropriate biodiversity conservation practices by the local community through restoration of deteriorated traditional water bodies, revitalization of degraded lands and protection of endangered species of trees in one select model village of the Chittorgarh district, India as part of the UNDP-GEF project.
- Worked on project proposals to invite funding for Natural Resource Management (NRM) related community based projects.

TECHNICAL SKILLS

Office Applications: Microsoft Excel, Word, PowerPoint, Access

GIS: ArcGIS 9.2

Statistical software: EViews, SPSS

Modeling Software: LEAP, STELLA

Decision Method tools: Solver, AHP

PUBLICATIONS

Kinley, Z., **Gupta, M.**, and Nazim, S., 2021. The Residential Energy Futures of Bhutan, Energy Efficiency (2021) 14:38, Available at: <https://doi.org/10.1007/s12053-021-09948-x>

Future Earth, The Earth League, WCRP (2021). 10 New Insights in Climate Science 2020. Stockholm <https://futureearth.org/10-insights-2020>

10 New Insights in Climate Science 2020 - a Horizon Scan, Accepted Manuscript for Global Sustainability (2021), DOI: 10.1017/sus.2021.2 (in Press)

IPCC Special Report Global Warming of 1.5 °C, Contributing author (Chapter 5: Sustainable development, poverty eradication, and reducing inequalities), <https://www.ipcc.ch/sr15/>

Technical Summary of the IPCC Special Report on Global Warming of 1.5 °C, Intergovernmental Panel on Climate Change (IPCC), https://report.ipcc.ch/sr15/pdf/sr15_ts.pdf

Güneralp, B., Zhou, Y., Ürge-Vorsatz, D., **Gupta, M.**, Yu, S., Patel, P., Fragkias, M., Li, X., Seto, K., (2017) Global scenarios of urban density and its impacts on building energy use through 2050, Special Feature - Sustainability in an Urbanizing Planet - Urbanization to Mega-Urban Regions, Proceedings of the National Academy of Sciences of the United States of America (PNAS)

Urge-Vorsatz, D., Kelemen, A., Thomas, S., Thema, J., Tirado-Herrero, S., Mzavanadze, N., Hauptstock, D., Suerkemper, F., Teubler, J., **Gupta, M.**, Chatterjee, S. 2016. Measuring multiple impacts of low-carbon energy options in a green economy context, Applied Energy 179 (2016) 1409–1426

IPCC Special Report Global Warming of 1.5 °C, Contributing author (Chapter 5: Sustainable development, poverty eradication, and reducing inequalities), Forthcoming in 2018.

Urge-Vorsatz, D., Kelemen, A., **Gupta, M.**, Chatterjee, S., Egyed, E. and Reith, A., 2015. Literature review on Multiple Impact quantification methodologies, D 2.1 report, Calculating and Operationalising the Multiple Benefits of Energy Efficiency in Europe (COMBI)

Gupta, M. 2015. The Future of Slums Hinges on Sustainability, Chapter 24, Condie, J., & Cooper, A. M. (2015). *Dialogues of Sustainable Urbanisation: Social Science Research and Transitions to Urban Contexts*. Penrith, N.S.W.: University of Western Sydney.

Gupta, M.K. 2007. Promoting Self Sufficiency Through Carbon Credits From Conservation and Management of Forests, Clark University, Worcester, MA, USA.

Gupta, M. 2010. Carbon payment levels for forestry land use on reclaimed mine lands in the seven-state Mid-West Regional Carbon Sequestration Partnership (MRCSP) region, Division of Resource Management, Davis College, West Virginia University, Unpublished research paper

Gupta, M.K. "Mapping and Analyzing Landscape Pattern, and Study of Vegetation Indices in Itanagar and Surroundings Using Remote Sensing and GIS Technology". Master's project report, Vikram University, India, May 2000.

PUBLISHED ABSTRACTS AND CONFERENCE PAPERS

Zam, K., **Gupta, M.**, 2019. The Residential Energy Futures of Bhutan, 6th International Conference on Natural Science and Technology (ICNST), Asian University for Women, Chittagong-4000

Somasekharan A., **Gupta, M.**, 2018. Solar Photovoltaic panels: The Next Generations E-Waste, 5th International Conference on Natural Science and Technology (ICNST), Asian University for Women, Chittagong-4000

Huynh, Tien, **Gupta, M.**, Rashid, H. 2018. Calculating the Carbon Footprint of a University Located in an Asian Developing Country, 5th International Conference on Natural Science and Technology (ICNST), Asian University for Women, Chittagong-4000

Gupta, Mukesh K. 'Clean and Sustainable Energy Systems in Slums Transformation', ICUE 2014: Green Energy for Sustainable Development, 19-21 March 2014, Pattaya City, Thailand.

Gupta, M. K., Saraf, S. Diffusion of Efficient Biomass Cookstoves in India: A Case Study in Socio-Technical Transitions, UNESCO 2014 Tech4Dev International Conference, Lausanne, Switzerland

Gupta, Mukesh K. 'Promoting Self Sufficiency Through Carbon Credits From Conservation and Management of Forests', The 7th International Science Conference on the Human Dimensions of Global Environmental Change, 29 April, 2009, Session: C140 Carbon trading schemes.

Language skills

English – *Fluent*, Hindi (Indian) - *Native*

FELLOWSHIPS, AWARDS AND MEMBERSHIPS

Jan 2018
Biography published in who's who based on the outstanding scientific contribution and being forefront of scientific fields, Marquis' Publisher, New Jersey, USA

Jan 2018 – May 2018
Expert Reviewer for the "2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories" report

Aug 2017 – May 2018	CEU Global Teaching Fellow
Apr 2013 -	Climate CoLab Catalyst, MIT Climate CoLab
Aug 2011 – Jul 2014	Central European University (CEU) Doctoral Fellowship
Aug 2012 – Jun 2013	Roma Graduate Preparation Program Teaching Fellowship, CEU
Aug 2005 – Jul 2007	Ford Foundation International Fellowship
Jul 2006 – Dec 2006	Future Generations Internship Fellowship
Sep 2015 -	Global Ambassador, TheNewABC (Life-skills based education start-up)

CERTIFICATE COURSES

Investment Planning Toward Low Emissions Development, March 17 – April 7, 2015, World Bank Institute (WBI)

Social Entrepreneurship, and Fundraising Certificates, November 2014, and March 2015, The Human Rights Initiative (HRSI), Central European University, Budapest

Low Carbon Development: Planning and Modelling (E-Learning) Course, November 18th – December 8th, 2013, World Bank Institute (WBI)

Energy Sector Strategies to Support Green Growth, October 28th – November 15th, 2013, World Bank Institute (WBI)

Webpage creation course, October 2014, Computer and Statistics Center, Central European University, Budapest