## RAMA MOHANA R. TURAGA

## Professor, Public Systems Group

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### EDUCATION

- Ph.D. in Public Policy (*Major: Environmental Policy; Minor: Econometrics*), 2007 Georgia Institute of Technology, Atlanta, GA, USA
- Master of Technology in Environmental Engineering, 1995 Indian Institute of Technology, Kharagpur, India
- Bachelor of Engineering in Civil Engineering, 1993 Andhra University, Visakhapatnam, India

### **APPOINTMENTS**

- Indian Institute of Management Ahmedabad, India
  - Professor, Public Systems Group, Dec 2023 Present
  - Associate Professor, Public Systems Group, Jan 2015 Nov 2023
  - Assistant Professor, Public Systems Group, Jun 2012 Dec 2014
  - Visiting Assistant Professor, Public Systems Group, Jun 2010 May 2012
- Dartmouth College, Hanover, USA
  - Research Associate, Thayer School of Engineering, Feb 2008 Jun 2010
- Georgia Institute of Technology, Atlanta, USA
  - o Postdoctoral Research Fellow, School of Public Policy, May 2007 Jan 2008
  - o Graduate Research Assistant, School of Public Policy, Aug 2001 Apr 2006
- Tata Consultancy Services
  - Business Analyst, Environment and Natural Resources Management Group, Dec 1995 – Aug 2001

#### RESEARCH

#### **Peer-reviewed Publications**

- 1. Arif, A., & Turaga, R. M. R. (2023). Covid-19 cure perceptions and media use in India. *Journal of Communication in Healthcare*, 16(4), 358-369.
- Turaga, R.M.R., & Mittal, H. (2023). The policy process of adopting environmental standards for coal plants in India: accommodating transnational politics in the Multiple Streams Framework. *Policy & Politics*, 51(2), 334-361.
- Bizikova, L., Nkonya, E., Minah, M., Hanisch, M., Turaga, R.M.R., Speranza, C.I., Karthikeyan, M., Tang, L., Ghezzi-Kopel, K., Kelly, J., Celestin, A.C., & Timmers, B. (2020). A scoping review of the contributions of farmers' organizations to smallholder agriculture. *Nature Food*, 1, 620-630.
- 4. Turaga, R.M.R. & Sugathan, A. (2020). Environmental regulations in India. Oxford Research Encyclopedia of Environmental Science.

- 5. Turaga, R. M. R., Jha-Thakur, U., Chakrabarti, S., & Hossain, D. (2020). Exploring the role of Urban Green Spaces in 'smartening' cities in India. *Impact Assessment and Project Appraisal*, *38*(6), 479-490.
- 6. Nalini, B., Turaga, R.M.R., & Bhamoriya. V. (2018). Farmer Producer Organizations as collectives: A case study. *Development Policy Review*, 36(6), 669-687.
- 7. Bhaskar, K. & Turaga, R.M.R. (2018). Extended Producer Responsibility as an instrument for electronic waste management: A critical analysis of India's e-waste Rules. *Journal of Industrial Ecology*, 22(4), 930-942.
- 8. Turaga, R.M.R. (2016). The politics of formulation of environmental impact assessment regulation in India: A case study. *Journal of Environmental Assessment Policy and Management*, 18(2), 1650016.
- 9. Turaga, R.M.R., Noonan, D., & Bostrom, A. (2015). Spatially fine regulation of air toxics. *Journal of Policy Analysis and Management*, 34(2), 298-327.
- 10. Turaga, R.M.R., Howarth, R., & Borsuk, M. (2014). Perceptions of mercury risk and its management. *Human and Ecological Risk Assessment*, 20(5), 1385-1405.
- 11. Turaga, R.M.R., Noonan, D., & Bostrom, A. (2011). Hot spots regulation and environmental justice. *Ecological Economics*, 70(7), 1395-1405.
- 12. Turaga, R.M.R., Howarth, R., & Borsuk, M. (2010). Pro-environmental behavior: Rational choice meets moral motivation. *Annals of the New York Academy of Sciences*, 1185(2010), 211-224.
- 13. Noonan, D., Turaga, R.M.R., & Baden, B. (2009). Superfund, hedonics, and the scales of environmental justice. *Environmental Management*, 44(5), 909-920.
- 14. Baden, B., Noonan, D., & Turaga, R.M.R. (2007). Scales of justice: Is there a geographic bias in environmental equity analysis? *Journal of Environmental Planning and Management*, 50(2), 163-185.
- 15. Bostrom, A., Barke, R., Turaga, R.M.R., & O'Connor, R. (2006). Environmental concerns and the 'New Environmental Paradigm' in Bulgaria. *Journal of Environmental Education*, 37(3), 25-40.
- 16. Bostrom, A., Turaga, R.M.R., & Ponomariov, B. (2006). Earthquake mitigation decisions and consequences. *Earthquake Spectra*, 22(2), 313-328.
- 17. Turaga, R.M.R. & Bozeman, B. (2005). Red tape and public organizations' decision making. *American Review of Public Administration*, 35(4), 363-379.
- 18. Turaga, U.T. & Turaga, R.M. (2004). Science policy for India: A memo to the Indian Council of Scientific and Industrial Research. *Philosophy Today*, 48(5), 109-115.
- 19. D. Nagesh Kumar, T. Rama Mohana Rao, & M. Bandyopadhyay. (1998). Optimal design of water distribution system using Linear Programming Gradient (LPG) method. *Journal of Indian Water Works Association*, Vol. XXX, 79-87.

# **Book Chapters**

 Kandathil, G., Varma, P., & Turaga, R. M.R. (2022). A women inclusive emancipatory alternative to corporate capitalism: The case of Kerala state initiated Kudumbashree programme. In R. Varma & D. Vijay (Eds.), *Organising Resistance and Imagining Alternatives in India* (pp. 318–354). Cambridge, UK: Cambridge University Press. 2. Kathuria, V. & Turaga, R.M.R. (2014). Small industry in India: Are CETPs an appropriate response toward pollution control? In "*Globalization and Standards: How Have Firms and Consumers Responded in India*?" In Das, K. (Eds.), *Globalization and Standards: How Have Firms and Consumers Responded in India* (pp. 245-260). New Delhi: Springer.

# **Non-Peer Reviewed Publications**

- 1. Turaga, R.M.R. (2019). Public policy for e-waste management in India. *Vikalpa: The Journal for Decision Makers*, 44(3) 130–132
- Turaga, R.M.R., & Bhaskar, K. (2019). Introduction to the colloquium on "E-waste Management: Issues and Strategies". *Vikalpa: The Journal for Decision Makers*, 44(3), 127-129
- 3. Turaga, R.M.R. (2018). Introduction to the colloquium on "State of Inclusive Growth in India: Some Perspectives." *Vikalpa: The Journal for Decision Makers*, 43(1), 24-26
- 4. Turaga, R., & Bhaskar, K. (2017). EPR and policy instruments for e-waste management: a review and lessons for India's new e-waste regulations. In *Proceedings of the Sixteenth International Waste Management and Landfill Symposium, Sardinia*, 2-6 October 2017
- 5. Turaga, R.M.R. & Kandathil, G. (2014). Defining the Social Responsibility of Business: Whose Business is it? *Economic and Political Weekly*, Vol. XLIX, No. 7, February 15, 2014

# **Working Papers**

- 1. Personal values as determinants of protective behaviours during Covid-19 pandemic in India (with Areiba Arif)
- 2. Media Exposure and Public Support for Environmental Protection: Evidence from India (with Pallavi Rachel George)
- 3. Adoption of ISO 14001 Standards in Indian Manufacturing Firms (with Vishal Gupta)
- 4. Strategic Determinants of CSR: Analysis of Internal Markets of Business Groups for Intangible Assets. (with Anish Sugathan and Sai Chittaranjan)

# **Conference Papers**

- "Environmental Standards for Coal Plants in India: An Application of the Multiple Streams Approach." Paper presented at the Environmental Politics and Governance Conference, Oslo (virtual), 24-26 June 2020
- "Why Firms Adopt Voluntary Environmental Initiatives in Developing Countries? The Case of ISO 14001 Certification among Indian Manufacturing Firms." Paper presented (co-authored with Vishal Gupta) at the Environmental Politics and Governance Conference, Stockholm, 28-30 June 2019
- "Adoption of ISO 14001 Standards in Indian Manufacturing Firms." Paper presented (coauthored with Vishal Gupta) at the 39th APPAM Annual Fall Research Conference, Chicago, 4-6 November 2017
- 4. "EPR and policy instruments for e-waste management: A review and lessons for India's new e-waste regulations." Paper presented (co-authored with Kalyan Bhaskar) at the 16th International Waste Management and Landfill Conference (Sardinia 2017), Forte Village, Sardinia, Italy, 2-6 October 2017

- 5. "Macroeconomic conditions and the Economic Growth vs. Environmental Protection Debate in Developing Countries." Paper presented at the Environmental Politics and Governance Conference, Gerzensee, Switzerland, 16-19 June 2016
- 6. "Policy Instruments for Electronic Waste Management under Extended Producer Responsibility Framework: A Review and Lessons for India's e-waste Rules." Paper presented (co-authored with Kalyan Bhaskar) at the 8th Biennial Conference of the Indian Society for Ecological Economics, Bangalore, 4-6 Jan 2016
- "Extended Producer Responsibility as an Instrument for Electronic Waste Management: A Critical Analysis of India's e-waste Rules." Paper presented (co-authored with Kalyan Bhaskar) at the Annual Fall Research Conference of the Association of Public Policy Analysis and Management, Albuquerque, NM, 6-8 Nov 2014
- 8. "Perceptions of Mercury Risk and its Management." Paper presented (co-authored with Mark Borsuk) at the World Congress on Risk 2012, Sydney, Australia, 18-20 July 2012
- "Individual Responsibility and its Influence on Sustainable Behaviors: An Experimental Study in the Context of Mercury-reducing Actions." Paper presented (co-authored with Richard Howarth and Mark Borsuk) at the Sixth Beinnial Conference of the United States Society for Ecological Economics, East Lansing, MI, 26-29 Jun 2011
- "Environmental Risk Indicators to Motivate Environmentally Responsible Behavior." Poster presented (co-authored with Mark Borsuk) at the Annual Meeting of the Society for Risk Analysis, Baltimore, MD, 6-9 Dec 2009
- 11. "Designing environmental risk indicators to motivate sustainable behavior." Presented (co-authored with Mark Borsuk) at the Annual Meeting of the Society for Risk Analysis, Boston, MA, 7-10 Dec 2008
- 12. "Hot Spots Regulation and Environmental Justice." Presented at the Thirtieth Annual APPAM Fall Research Conference, Los Angeles, 6-8 Nov 2008
- 13. "Effects of Viewing Seismic Risk Maps on Subjective Probabilities and Risk Perceptions." Co-author (with Ann Bostrom and Richard Catrambone) on the paper presented by Bostrom at the XIII International Conference on the Foundations Applications of Utility, Risk and Decision Theory, Barcelona, 2-5 Jul 2008
- 14. "Spatial Resolution and Equity in Risk-based Regulation." Presented (co-authored with Douglas Noonan and Ann Bostrom) at the Annual Meeting of the Society for Risk Analysis, San Antonio, TX, 9-12 Dec 2007
- 15. "Manipulating Maps to Affect Risk Perception: The Effects of Landmarks and Dimensionality." Co-author on the poster presented at the 28<sup>th</sup> Annual Conference of the Society for Judgment and Decision Making, Long Beach, CA, 16-19 Nov 2007
- 16. "Spatial Resolution, Costs, and Equity in Air Toxics Regulation." Poster presented at the Twenty-Ninth Annual APPAM Research Conference, Washington, D.C., 8-10 Nov 2007
- 17. "Spatial Resolution in Air Toxics Regulation." Presented (co-authored with Ann Bostrom) at the Annual Meeting of the Society for Risk Analysis, Baltimore, MD, 3-6 Dec 2006
- 18. "Superfund, Hedonics, and the Scales of Environmental Justice." Co-author (with Doug Noonan and Brett Baden) on the paper presented by Noonan at the 3<sup>rd</sup> World Congress of Environmental and Resource Economists, Tokyo, Japan, 3-7 Jul 2006
- 19. "The Partnership for Environmental Research and Community Health (PERCH) Phase III, Part 1: Community-scale risk assessment in greater Pensacola, Florida." Presented (co-

authored with Ryan Gesser, Michael Chang, Ted Russell, and Ann Bostrom) at the 14<sup>th</sup> Joint Conference on the Applications of Air Pollution Meteorology with the Air and Waste Management Assoc., The 86<sup>th</sup> Annual Meeting of the American Meteorological Society, Atlanta, GA, 28 Jan – 3 Feb 2006

- 20. "Spatial Decay of Urban Disamenities and Environmental Justice." Co-author (with Brett Baden and Douglas Noonan) on the paper presented by Noonan at Southern Economic Association 2004 Annual Meeting, New Orleans, LA, 21-23 Nov 2004
- 21. "Assessment Endpoints and Comparative Risk Analysis: The Case of Air Pollution." Presented (co-authored with Ann Bostrom) at the Twenty-Sixth Annual APPAM Research Conference, Atlanta, GA, 28-30 Oct 2004
- 22. "Acceptable Consequences in Earthquake Engineering Decisions." Co-author on the poster presented by Ann Bostrom at the 13<sup>th</sup> World Congress on Earthquake Engineering, Vancouver, Canada, 1-6 Aug 2004
- 23. "Environmental Risk Perceptions in Bulgaria." Presented at the Meeting of Science & Technology Policy Programs, Washington, D.C., Jul 2003

# **RESEARCH GRANTS**

- Principal Investigator, ESG Risk and Firm Valuation. Wipro Foundation
- Principal Investigator, Sustainability Case Study Development. Wipro Foundation
- **Co-Investigator**, "Research on Innovation in Manufacturing SMEs in India." Funded by Tilburg University, the Netherlands. (Co-investigator: Vishal Gupta)
- **Co-Investigator**, "Environmental Values, Beliefs, and Behavior." Funded by the Rockefeller Center for Public Policy at Dartmouth College, Hanover, NH, 2009. Value: US \$20,173 (Principal Investigators: Richard Howarth and Mark Borsuk)
- **Principal Investigator**, "Environmental Values, Beliefs, and Behavior." Time-sharing Experiments for the Social Sciences (<u>http://tess.experimentcentral.org/</u>). Funding for an online experiment-based survey, 2010. (Co-investigators: Mark Borsuk and Richard Howarth)

## TEACHING CASES

 GAIL 'Saksham' Program: Remoulding the Future. A case study on GAIL's corporate social responsibility initiative (co-authored with Vishal Gupta and Swetha Mittal). Case # IIMA/PSG0123. Also available as document # A00179-PDF-ENG at Harvard Business Publishing Case Repository

## **TEACHING EXPERIENCE AND TRAINING**

## Indian Institute of Management Ahmedabad, India

- Instructor, Business, Environment, and Sustainability (MBA)
- Co-instructor, Managing Sustainability (MBA-Agribusiness)
- Instructor, Probability & Statistics II & III (MBA)
- Co-instructor, Investigating Corporate Social Irresponsibilities (MBA)
- Instructor, Public Policy Instruments for Environmental Management (Ph.D.)
- Co-instructor, Public Policy (Ph.D.)

- Co-instructor, Methods for Policy Analysis and Research (Ph.D.)
- Co-instructor, Crafting and Publishing of Research (Ph.D.)

### Dartmouth College, Hanover, NH, USA

• Successfully completed a Teachers Training Series conducted by the Dartmouth Center for Advancement of Learning, May 2009

### School of Public Policy, Georgia Institute of Technology, Atlanta, GA, USA

- Guest Lecturer, Statistical Analysis for Public Policy, 2006-07
- Instructor, Math Refresher for Economics, 2005-06
- Teaching Assistant, Microeconomics, 2005-06
- Teaching Assistant, Statistics for Public Policy, 2001-02

### Department of Civil Engineering, Indian Institute of Technology, Kharagpur, India

• Teaching Assistant, Engineering Mechanics, 1994-95

#### Awards and Honours

- Finalist, Dr. Alfred N. and Lynn Manos Page Prize for Sustainability Issues in Business Curricula, awarded by the Darla Moore School of Business at the University of South Carolina for innovative course design of the MBA course Managing Sustainability (worldwide competition), 2014
- Outstanding Ph.D. Student, School of Public Policy, Georgia Tech, 2007-2008
- Dean's Fellowship for Dissertation Support, Ivan Allen College and School of Public Policy, Georgia Tech (department-wide competitive award), 2006-2007
- Student Travel Award, Society for Risk Analysis (competitive award), 2006
- Air and Waste Management Association (Georgia Chapter) Research Scholarship (statewide competitive award), 2006
- Kancharaddy Memorial Award for best paper, Journal of Indian Water Works Association, 1998
- Indian Institutes of Technology Graduate Aptitude Test in Engineering Scholarship, 1993-1995
- Outstanding academic performance recognized by nomination to Andhra University's Academic Senate, 1992

#### **STUDENT ADVISING**

#### Ph.D. Thesis Advisory Committees

- 1. Member, Pallavi Rachel George (Public Systems Group, IIM Ahmedabad)
- 2. Member, Bikalp Chamola (Public Systems Group, IIM Ahmedabad)
- 3. Member, Srishti Mishra (Public Systems Group, IIM Ahmedabad)
- 4. Member, Pranusha Kulkarni (Public Systems Group, IIM Ahmedabad)
- 5. Member, Santosh Gedam (Public Systems Group, IIM Ahmedabad)
- 6. Chair, Areiba Arif (Public Systems Group, IIM Ahmedabad)
- 7. Chair, Rusha Das (Public Systems Group, IIM Ahmedabad)
- 8. Member, Anar Bhat (Centre for Management of Agriculture, IIM Ahmedabad)

- 9. Member, Anukriti Dixit (Public Systems Group, IIM Ahmedabad)
- 10. Member, Deepika Saluja (Public Systems Group, IIM Ahmedabad)
- 11. Member, Niraj Joshi (CEPT, Ahmedabad)

## **OPINION ARTICLES**

- Economic growth vs environmental sustainability. Mint, 16 April 2016
- Managing India's electronic waste (with Kalyan Bhaskar). Mint, 18 May 2017
- <u>What makes market mechanisms for emissions abatement work in India?</u> (with Anish Sugathan): Speak Your Mind forum of the journal *Public Administration Review*
- Bringing GM to the table. The Hindu, 21 June 2017
- <u>Red alert on the green index</u>. The Hindu, 29 January 2018
- <u>Will COVID-19 lockdowns generate public support for climate change mitigation?</u>. The Wire, 29 April 2020
- <u>It's time to flatten the pandemic stereotyping</u> (with George Kandathil and Joshy Jacob). The Hindu, 16 July 2020
- EIA draft needs a comprehensive relook. The Hindu Business Line, 7 August 2020
- <u>Right intent, confusing content</u>. The Hindu, 5 July 2022

## INDUSTRY EXPERIENCE

## Tata Consultancy Services, India, Dec 1995 – Aug 2001

## Environmental Policy Analysis and Strategy

- Analyzed industrial pollution in Gujarat and proposed policy solutions in consultation with stakeholders, including NGOs, state agencies, and industrial associations
- Co-led World Bank-funded project to develop environmental indicators and build capacity for environmental management in Gujarat; wrote and presented report to the Chair of state pollution control agency
- Developed a database of hazardous waste generating industries in India's four mostindustrialized states; assessed applicability of various hazardous waste management technologies to Indian context

## Environmental Impact Assessment (EIA)

- Co-led and participated in environmental impact assessments for new infrastructure, oil pipelines, and large power plants. Wrote rapid and comprehensive EIA reports used by clients to obtain regulatory permits and project financing
- Supervised third-party environmental monitoring agencies, monitored project budgets, mentored junior consultants, identified new business, and developed technical and financial proposals for new projects

## PROFESSIONAL SERVICE AND AFFILIATIONS

 Member, Technical Sub-committee on "Municipal Solid Waste, Landfill reclamation & E-Waste Management," the Office of the Principal Scientific Advisor to the Government of India, February 2022 - Present

- Member, Committee for circular economy in electronic waste, NITI Aayog, Government of India, March 2021 May 2021
- Associate Editor, Vikalpa: The Journal for Decision Makers, 2018-Present
- International Steering Committee Member, Environmental Politics and Governance Conference, 2017-Present
- Chief Editor, Vikalpa: The Journal for Decision Makers, 2015-18
- Expert Committee Member for developing curriculum for the masters program in the School of Ecology and Environmental Studies at Nalanda University, India
- Expert panel member for review of research projects at the Ashoka Trust for Research in Environment and Ecology, Bengaluru, India
- Invited Speaker at the Sixth PRME (Principles for Responsible Management Education) ASIA Forum, Goa, India
- Member, Association for Public Policy Analysis and Management
- Member, International Society for Ecological Economics
- Life Member, Indian Society for Ecological Economics
- Ad-hoc Reviewer: Ecological Economics, Environmental Management, Environmental Science & Technology, Vikalpa, Journal of Urban Affairs, Journal of Environmental Planning and Management, Natural Hazards Review, Conservation, Resources, & Recycling, The U.S. National Science Foundation, Environment and Development Economics, World Development, Environmental Impact Assessment Review, Energy Research & Social Science, Journal of Asia Business Studies, PLoS One, Environment, Development, and Sustainability, Management Decision