

## Curriculum Vitae of E. Somanathan

**Address:** Indian Statistical Institute, 7 Shaheed Jeet Singh Marg, New Delhi 110016, India.

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**Date of birth:** 3 November, 1963.

**Current Positions:** Professor, Economics and Planning Unit, Indian Statistical Institute, Delhi. Head, CECFEE ([Centre for research on the Economics of Climate, Food, Energy, and Environment](#)).

**Previous Positions:** Executive Director, South Asian Network for Development and Environmental Economics (SANDEE), 2015-17. Malmsten Visiting Professor, University of Gothenburg, 2015-17. Gilbert White Fellow, Resources For the Future, Washington, DC, 2015-16. Visiting Professor, Department of Economics and Princeton Environmental Institute, Princeton University, 2010-11. Associate Professor, Planning Unit, Indian Statistical Institute, Delhi 2001-2005. Visiting Assistant Professor of Economics, University of Michigan, Ann Arbor, 1998-2000. Assistant Professor of Economics, Emory University, 1995-1998.

**Education:** Ph.D. Economics, Harvard University, 1995; Thesis: *Three Essays in the Economics of Institutions*; Thesis Committee: Eric Maskin, Alberto Alesina, Martin Weitzman. M.A. Economics, Delhi School of Economics, 1988; M.S. Mathematics, Purdue University, 1986; B.A. (Hons.) Mathematics, Delhi University, 1984.

### Current PhD student:

Praveen Kumar

### Former PhD students:

Ashokankur Datta “Essays in environmental economics.”

Eshita Gupta - “Three essays on the impact of global warming on India.”

Ridhima Gupta - “Three essays on agricultural productivity and aerosol pollution.”

**Recent honors:** Invited plenary panelist, 6th World Congress of Environmental and Resource Economists, Gothenburg, June 2018. Fellow, Bureau for Economic Analysis of Development (BREAD).

### Working Papers

“Electric Stoves as a Solution to Household Air Pollution: Evidence from India”. E. Somanathan, Eshita Gupta, Marc Jeuland, Rachit Kamdar, Utkarsh Kumar, T. V. Ninan, Vidisha Chowdhury, Suvir Chandna, Michael H. Bergin, Karoline Barkjohn, Christina Norris, T. Robert Fetter, and Subhrendu K. Pattanayak.

“[The Impact of Temperature on Productivity and Labor Supply: Evidence from Indian Manufacturing](#).” With Rohini Somanathan, Anant Sudarshan, Meenu Tewari. Forthcoming in the *Journal of Political Economy*.

“[The Distributional Impact of Climate change: Why Food Prices Matter](#).” With Eshita Gupta and Bharat Ramaswami. Forthcoming in *Economics of Disasters and Climate Change*.

“Drilling in the drought? The industrial organization of groundwater.” With Ujjayant Chakravorty.

“Community Managed Forest Groups and Preferences for REDD+ Contract Attributes: A choice experiment survey of communities in Nepal.” Sahan T. M. Dissanayake, Prakash Jha, Bhim Adhikari, Rajesh Bista, Randall Bluffstone, Harisharan Luintel, Peter Martinsson, E. Somanathan, Naya Sharma Paudel, Michael Toman.

## **Publications:**

### **Refereed Journal Articles**

“[Value of Cleaner Neighborhoods: Application of Hedonic Price Model in Low Income Context.](#)” Mani Nepal, Rajesh K. Rai, Madan S. Khadayat, E. Somanathan. *World Development* Volume 131, 2020.

“[Ensuring Water Availability to Water Users through Incentive Payment for Ecosystem Services Scheme: A Case Study in a Small Hilly Town of Nepal.](#)” Rai, Rajesh K., Mani Nepal, Laxmi D. Bhatta, Saudamini Das, Madan S. Khadayat, E. Somanathan, and Kedar Baral. *Water Economics and Policy* (2019), 5(4): 1850002.

“[Are Renewable Energy Subsidies in Nepal Reaching the Poor?](#)” Dipendra Bhattarai, E. Somanathan, Mani Nepal (2018). *Energy for Sustainable Development* 43: 114-122.

“[Does Collective Action Sequester Carbon? Evidence from the Nepal Community Forestry Program.](#)” Randall Bluffstone, E. Somanathan, Prakash Jha, Harisharan Luintel, Rajesh Bista, Michael Toman, Naya Paudel (2018). *World Development* 101: 133-141.

“[Global warming and local air pollution have reduced wheat yields in India.](#)” With Ridhima Gupta and Sagnik Dey (2016). *Climatic Change*.

“[Climate Policy and Innovation in the Absence of Commitment.](#)” With Ashokankur Datta. *Journal of the Association of Environmental and Resource Economists* (2016). 3(4):917-955.

“[Biogas: Clean energy access with low-cost mitigation of global warming.](#)” With Randall Bluffstone. *Environmental and Resource Economics* (2015). 62: 265–277.

“[Conserving forests for biodiversity - status and trends from the global forest resource assessment 2015.](#)” With David Morales-Hidalgo and Sonja N. Oswalt. *Forest Ecology and Management* (2015), 352: 68-77.

“[Are embankments a good flood-control strategy? A case study on the Kosi river.](#)” *Water Policy*. (2013), 15: 75-88.

“The Demographics of Cooperation: Evidence from a field experiment in the Himalayas.” With Sujoy Chakravarty, Carine Sebi, and E. Theophilus. *Journal of Economics and Management*, (2013), 9(2):231-269.

[Effects of Information on Environmental Quality in Developing Countries.](#) *Review of Environmental Economics and Policy*, 4(2): 275-292, Summer 2010.

[Decentralization for cost-effective conservation](#), with R. Prabhakar and B.S. Mehta, *Proceedings of the National Academy of Sciences of the USA*, 106(11): 4143-4147, March 17, 2009.

[Awareness and the Demand for Environmental Quality: Survey Evidence on Drinking Water in Urban India](#) with Jyotsna Jalan and Saraswata Chaudhuri, *Environment and Development Economics*, 14(6): 665-692, December 2009.

[The Importance of Being Informed: Experimental Evidence on the Demand for Environmental Quality](#), with Jyotsna Jalan. *Journal of Development Economics* 87(1): 14-28, August 2008.

[“How Degraded are Himalayan Forests?”](#) with R. Prabhakar and Bhupendra Singh Mehta, *Current Science* 91(1): 61-67, July 10, 2006.

[“A Simple Model of Collective Action”](#) with Rajiv Sethi. *Economic Development and Cultural Change*, 54(3): 725-747, April 2006. Reprinted in *The Contested Commons: Conversations between Economists and Anthropologists*, edited by Pranab Bardhan and Isha Ray, Oxford: Blackwell, 2008.

[“Valuing Lives Equally: Distributional Weights for Welfare Analysis”](#). *Economics Letters*, 90:122-125, January 2006.

[“The Evolution of Honesty”](#), with Paul H. Rubin, *Journal of Economic Behavior and Organization*, 54(1): 1-17, May 2004.

[“Understanding Reciprocity”](#) with Rajiv Sethi, *Journal of Economic Behavior and Organization*, 50(1): 1-27, January 2003.

[“Can Growth Ease Class Conflict?”](#) *Economics and Politics*, 14(1): 65-81, March 2002.

[“Preference Evolution and Reciprocity.”](#) with Rajiv Sethi, *Journal of Economic Theory*, 97: 273-297, April 2001.

[“Humans as Factors of Production: An Evolutionary Analysis.”](#) with Paul H. Rubin, *Managerial and Decision Economics*, 19: 441-455, Nov-Dec 1998.

[“Evolutionary Stability of Pure-Strategy Equilibria in Finite Games.”](#) *Games and Economic Behavior*, 21: 253-265, Oct-Nov 1997

[“The Evolution of Social Norms in Common Property Resource Use.”](#) with Rajiv Sethi, *American Economic Review*, 86(4): 766-788, September 1996. Reprinted in Bruce A. Larson (Ed.), *Property Rights and Environmental Problems I*, Ashgate, Aldershot, UK, 2003, pp. 345-367.

### **Other published papers and chapters**

“Institutions, the Environment, and Development,” in *Economic Development and Institutions*, Edited by Jean-Marie Baland, Francois Bourguignon, Jean-Philippe Platteau and Thierry Verdier, Princeton University Press, 2020.

"[Air Pollution in the Hindu Kush Himalaya](#)." Saikawa, Eri, Arnico Panday, Shichang Kang, Ritesh Gautam, Eric Zusman, Zhiyuan Cong, E. Somanathan, and Bhupesh Adhikary. In *The Hindu Kush Himalaya Assessment*, Philippos Wester, Arabinda Mishra, Aditi Mukherji, Arun Bhakta Shrestha (Eds.). pp. 339-387. Springer, Cham, 2019.

[“Forest Carbon Supply in Nepal: Evidence from a Choice Experiment.”](#) Dissanayake, S., Bluffstone, R.A., Somanathan, E., Luintel, H., Paudel, N.S. and Toman, M., 2018. The World Bank.

["Costs and benefits of reducing deforestation and forest degradation in Nepal."](#) Rai, Rajesh Kumar, Mani Nepal, Bhaskar Singh Karky, E. Somanathan, N. Timalisina, M. S. Khadayat, and N. Bhattarai. *ICIMOD Working Paper 2017/5* (2017).

“A view from India” in *Towards a workable and effective climate regime*. Scott Barrett, Carlo Carraro, and Jaime de Melo (Eds). VoxEU.org, 2015.

[“National and Sub-national Policies and Institutions.”](#) Somanathan E., T. Sterner, T. Sugiyama, D. Chimanikire, N. K. Dubash, J. Essandoh-Yeddu, S. Fifita, L. Goulder, A. Jaffe, X. Labandeira, S. Managi, C. Mitchell, J.P. Montero, F. Teng, and T. Zylicz, 2014: In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Salvolainen, S. Schlömer, C. von Stechow, T. Zwickel and J. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[“Summary for Policymakers.”](#) In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2014.

[“Technical Summary.”](#) Edenhofer O., R. Pichs-Madruga, Y. Sokona, S. Kadner, J.C. Minx, S. Brunner, S. Agrawala, G. Baiocchi, I.A. Bashmakov, G. Blanco, J. Broome, T. Bruckner, M. Bustamante, L. Clarke, M. Conte Grand, F. Creutzig, X. Cruz-Núñez, S. Dhakal, N.K. Dubash, P. Eickemeier, E. Farahani, M. Fischedick, M. Fleurbaey, R. Gerlagh, L. Gómez-Echeverri, S. Gupta, J. Harnisch, K. Jiang, F. Jotzo, S. Kartha, S. Klasen, C. Kolstad, V. Krey, H. Kunreuther, O. Lucon, O. Masera, Y. Mulugetta, R. B. Norgaard, A. Patt, N. H. Ravindranath, K. Riahi, J. Roy, A. Sagar, R. Schaeffer, S. Schlömer, K. C. Seto, K. Seyboth, R. Sims, P. Smith, E. Somanathan, R. Stavins, C. von Stechow, T. Sterner, T. Sugiyama, S. Suh, D. Ürge-Vorsatz, K. Urama, A. Venables, D. G. Victor, E. Weber, D. Zhou, J. Zou, and T. Zwickel. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J. C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2014.

[Impact of Biometric Identification-based transfers.](#) With Arka Roy Chaudhuri, *Economic and Political Weekly*, 46(21): 77-80, May 21, 2011.

[What Do We Expect from an International Climate Agreement? A Perspective from a Low-income Country.](#) In Joseph Aldy and Robert Stavins (Eds), *Post-Kyoto International Climate Policy: Implementing Architectures for Agreement*, Cambridge University Press, 2010.

“Climate Change: Challenges Facing India’s Poor.” with Rohini Somanathan, *Economic and Political Weekly*, 44(31): 51-58, August 1, 2009.

[Discrimination in an Elite Labour Market? Job Placements at the Indian Institute of Management - Ahmedabad](#), with Sujoy Chakravarty. *Economic and Political Weekly*, 43(44): 45-50, November 2008.

[Biodiversity in India](#), pp 32-35 in the *Oxford Companion to Economics in India*, edited by Kaushik Basu, Oxford University Press, 2007.

“[Collective Action for Forest Conservation: Does Heterogeneity Matter?](#)” with R. Prabhakar and B.S. Mehta, in Jean-Marie Baland, Pranab Bardhan, and Samuel Bowles (Eds.), *Inequality, Cooperation, and Environmental Sustainability*, Princeton University Press, November 2006.

[Measuring the marginal value of water and the elasticity of demand for water in agriculture](#), with R. Ravindranath, *Economic and Political Weekly*, 41(26): 2712-2715, June 30-July 7, 2006.

[Environmental Policy Instruments in Developing Countries](#) with Thomas Sterner, pp. 217-244 in *Economic Development and Environmental Sustainability: New Policy Options*, edited by Ramon Lopez and Michael A. Toman, Oxford University Press, June 2006.

“[Inequality and Environmental Policy](#)”, in M. Basili, M. Franzini, and A. Vercelli (Eds.), *Environment, Inequality, and Collective Action*, Routledge, January 2006.

“[Norm Compliance and Strong Reciprocity](#)” with Rajiv Sethi, pp. 229-250 in Herbert Gintis, Samuel Bowles, Robert Boyd, Ernst Fehr (Eds.), *Moral Sentiments and Material Interests: On the Foundations of Cooperation in Economic Life*, MIT Press, January 2005.

“[What can we learn from Cultural Group Selection and Co-evolutionary Models?](#)” with Rajiv Sethi, *Journal of Economic Behavior and Organization*, 53(1): 105-108, January 2004.

“Empowering Local Government: Lessons from Europe.” *Economic and Political Weekly*, 36(41): 3935-40, October 13, 2001.

“Deforestation, Property Rights, and Incentives in the Central Himalaya.” *Economic and Political Weekly*, 26: Political Economy Supplement, 37-46, Jan 1991.

## **Edited Book**

*New and Enduring Themes in Economic Development*, with Bhaskar Dutta and Tridip Ray, Singapore: World Scientific Press, 2009.

## **Book reviews**

Review of *Post-Growth Thinking in India*, edited by Gerber and Raina, in *Ecology, Economy, and Society*. 2019.

“[Understanding India’s Economic Growth](#)”, a review in the *Economic and Political Weekly* March 19, 2011 of Pulapre Balakrishnan’s *Economic Growth in India: History and Prospect*, (New Delhi: Oxford University Press, 2010).

[Review](#) in the *Indian Growth and Development Review*, 2010, 3(1): 92-94 of *Taming the Anarchy: Groundwater Governance in South Asia*, by Tushaar Shah, Washington: RFF Press, 2008.

[Review](#) in *Current Science*, 2010, 98(2): 263-264 of *Economics of Forest Resources*, by Gregory S.

Amacher, Marku Ollikainen, Erkki A. Koskela, Cambridge: MIT Press, 2009.

[Review](#) in the *American Journal of Agricultural Economics*, 2007, 89(4): 1122-1124 of *Asian Irrigation in Transition: Responding to Challenges*, Ganesh P. Shivakoti, Douglas L. Vermillion, Wai-fung Lam, Elinor Ostrom, Ujjwal Pradhan and Rober Yoder, (Eds.), New Delhi: Sage, 2005.

[Recent Revolutions in Economic Theory](#), a review in the *Economic and Political Weekly* May 28-June 4, 2005 of Samuel Bowles' *Microeconomics: Behavior, Institutions, and Evolution*, (Oxford University Press, 2004).

[Review](#) in the *American Journal of Agricultural Economics* 2006, 88(2): 520-522 of *Earthly Politics: Local and Global in Environmental Governance*. Sheila Jasanoff and Marybeth Long Martello, eds. Cambridge, MA and London, UK: The MIT Press, 2004.

### **Professional Services, Memberships, etc:**

**Co-Editor:** *Environment and Development Economics* (a Cambridge University Press journal) from January 1, 2020. **Editor:** 2015-2019. **Associate Editor:** 2006-2014.

**Fellow:** Bureau for Research and Economic Analysis of Development (BREAD), Cambridge MA, 2002 onwards, and **Member of the Board** (2002-14).

**Member** (2020-), Lancet Commission on COVID-19 Task Force on the Green Recovery.

**Member of the Board** (2019-) of the Environment for Development Initiative, University of Gothenburg.

**Member of the Board of Management** (2019-2022) of the TERI School of Advanced Studies.

**Member of the Economic Advisory Council** (2021-) Environmental Defense Fund, New York.

**Member** (2020-), Climate Change Research and Policy Network of the CEPR (Centre for Economic Policy Research), London.

**Member**, RWI Research Network, Leibniz-Institut für Wirtschaftsforschung e.V., 2019-

**Co-ordinating Lead Author:** Chapter 15 of the contribution of Working Group III to the 5<sup>th</sup> Assessment Report of the Inter-governmental Panel on Climate Change.

**Associate Editor:** *Journal of Economic Behavior and Organization* December 2001 to August 2006.

**Member, Equity Sub-group**, Ministry of Environment and Forests, Govt of India, 2012.

**Member of the Core Group on the Use of Information and Communication Technology (ICT) in the Forestry Sector**, Ministry of Environment and Forests, Govt of India, 2009-10.

**Member of the Academic Advisory Board**, Foundation for Ecological Research, Advocacy and Learning, Pondicherry, 2009-2013.

**Member of the Executive Committee**, Indian Society for Ecological Economics, 2004-2006, 2017-2018.

**Resource Person** South Asian Network for Development and Environmental Economics (SANDEE), 2004-2015.

**Technical Editor** SANDEE Working Paper Series, 2004-2006.

**Referee for:**

*American Economic Review,*  
*American Journal of Agricultural Economics,*  
*Bulletin of Economic Research,*  
*Bulletin of Mathematical Biology,*  
*Climatic Change,*  
*Climatic Change Letters,*  
*Conservation Letters,*  
*Current Science,*  
*Ecological Economics,*  
*Economic and Political Weekly,*  
*Economic Development and Cultural Change,*  
*the Economic Journal of the Royal Society,*  
*Economics and Philosophy,*  
*Economics and Politics,*  
*Economics Letters,*  
*Energy Policy,*  
*Environment and Development Economics,*  
*Environmental and Resource Economics,*  
*European Economic Review,*  
*Forest Policy and Economics,*  
*Games and Economic Behavior,*  
*Global Change Peace & Security,*  
*Indian Growth and Development Review,*  
*International Environmental Agreements: Politics, Law and Economics,*  
*International Game Theory Review,*  
*Israel Science Foundation,*  
*Journal of the Association of Environmental and Resource Economists,*  
*Journal of Development Economics,*  
*Journal of Economic Behavior and Organization,*  
*Journal of Economic Dynamics and Control,*  
*Journal of Environmental Economics and Management,*  
*Journal of Evolutionary Economics,*  
*Journal of Institutional and Theoretical Economics,*  
*Managerial and Decision Economics,*  
*National Science Foundation (USA),*  
*Physica D: Nonlinear Phenomena,*  
*Proceedings of the National Academy of Sciences,*  
*PLOS One,*  
*Quarterly Journal of Economics,*  
*Resource and Energy Economics,*  
*Review of Economics and Statistics,*  
*Review of Environmental Economics and Policy,*  
*South Asian Network for Development and Environmental Economics,*  
*Theory and Decision,*  
*Water Policy,*  
*Water Resources Research,*

*World Development.*