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PROFESSIONAL SUMMARY

Dr. Rajan has over 15 years experience in environmental and energy analysis and project implementation in government, consulting and non-governmental organizations in the US and international contexts. He held a senior management position at the International Energy Initiative, Bangalore, where he worked on power sector reform and access in Asian countries, urban transport and decentralized rural energy projects. As a member of the engineering staff at the California Air Resources Board, El Monte, he participated in a 3-year evaluation of the statewide motor vehicle inspection/maintenance program. He has coordinated independent reviews of Environmental Impact Assessments for NGOs in Asian countries, taught environmental policy at the Pratt Institute, New York, and testified at the United Nations Commission on Sustainable Development. He is currently a Senior Fellow at Tellus Institute where he leads the Global Politics and Institutions Program and also works on energy and climate policy.

Education

D.Env. Environmental Science and Engineering Program (cross-disciplinary doctorate), UCLA, 1994.
M.S. Meteorology, South Dakota School of Mines and Technology, 1985.
B.Tech. Aeronautical Engineering, Indian Institute of Technology Bombay, 1983.

Publications

Books/Chapters

S.C. Rajan (forthcoming) *Automobility and the Liberal Disposition*. In Steffen Boehm et al. (Eds.), *Rethinking Automobility: Representation, Subjectivity, Politics*, University of Minnesota Press, Minneapolis.

S.C. Rajan (2005) Contributions relating to Corruption and Pollution. In Ashis Nandy and Vinay Lal (Eds.), *The Future of Knowledge and Culture: A Dictionary for the 21st Century*, Penguin India, New Delhi.

S.C. Rajan (2004) Public Avenues to Private Spaces: Regulating the Car. In J.D. Wolfhorst and Anne K. Haugestad (eds.), *Building Sustainable Communities: Ecological Justice and Global Citizenship*, Rodopi, Amsterdam, New York.

S.C. Rajan (2004) A Fine Balance: Controlling Automobile Pollution in California. In Melanie Dupuis (ed.), *Smoke And Mirrors: Air Pollution as a Social and Political Artefact*, New York University Press, New York.

Dubash, N. and S.C. Rajan (2002) India: Electricity Reform Under Political Constraints. In *Power Politics: Equity and Environment in Electricity Reform*, World Resources Institute, Washington, DC.

S.C. Rajan (1999) Energy and Environmental Management. In S.N. Chary and V. Vyasulu (Eds.) *Environmental Management: An Indian Perspective* New Delhi, Macmillan.

S.C. Rajan (1996) *The Enigma of Automobility: Democratic Politics and Pollution Control*, University of Pittsburgh Press, Pitt Series on Policy and Institutional Studies.

M. FitzSimmons, J. Glaser, R. Montemor, S. Pincetl and S.C. Rajan (1994) "Environmentalism and the liberal state," in Martin O'Connor: *Is Capitalism Sustainable?* Guilford Books.

Journals

S.C. Rajan (in review): "Automobility and the liberal disposition," *Theory and Event*.

S.C. Rajan (in review): "Is Democracy Possible, Part II: Cosmopolitan Ideas and the Problem of Global Political Community," *New Left Review*.

S.C. Rajan (in review): "Automobility and discomposure in liberal ethics," *Environmental Ethics*.

S. Byravan and S.C. Rajan (2005): "Immigration could ease climate change impact," *Nature* Mar 24; 434 (7032):435

S.C. Rajan (2004): "Climate Change Dilemma: Technology, Social Change, or Both? An Examination of Long-Term Transport Policy Choices in the United States," accepted by *Energy Policy*.

S.C. Rajan (2004): "The role of social change in the US transport sector for climate change mitigation," *Energy for Sustainable Development*, VIII (2), 39-46.

A.A. Phadke and S.C. Rajan (2003) "Electricity Reforms in India: Not too late to go back to the drawing board," *Economic and Political Weekly*, 38 (15).

N.K.Dubash and S.C. Rajan (2001) "Power Politics: The process of power sector reforms in India," *Economic and Political Weekly*, 36(35): 3367-3390.

S.C. Rajan and A. D'Sa (2000) "Captive power generation – air pollution impacts due to increased capacity utilisation," *Energy for Sustainable Development*, 4(1): 77-85.

S.C. Rajan (1996) "Diagnosis and repair of excessively emitting vehicles," *Journal of the Air and Waste Management Association*, (46): 940-952.

S.C. Rajan (1992) "Legitimacy in environmental policy - the regulation of automobile maintenance in California," *International Journal of Environmental Studies*, (42): 243-258.

M. FitzSimmons, J. Glaser, R. Montemor, S. Pincetl and S.C. Rajan (1991) "Environmentalism and the American liberal state," *Capitalism, Nature, Socialism*, 6.

R.D. Farley and S.C. Rajan (1986) "Comparison of numerical schemes applied to the particle growth equation in a hail model," *Preprints in Cloud Physics*, American Meteorological Society, JP301-304.

Technical Reports

S. Kartha, G. Leach, and S.C. Rajan (2004). *Energy from Biomass: A Guide for Policymakers*, for ESMAP, World Bank.

S.C. Rajan, R. Cleetus, N. Odeh and S. Kartha (2002). *The UNDP World Energy Assessment Training Modules*.

S. Bernow, A. Cotter and S.C. Rajan (2002). *TCRP Project J-06/Task21 FY'01 A New Process for Determining TCRP New Paradigms Research Topics*. TCRP New Paradigms Working Group.

W. Dougherty, S. Kartha, A. Bailie, S. Bernow and S.C. Rajan (2001), *Assessment of Policies to Support Fuel Cell Buses and the Transition to the Hydrogen Economy*.

S.C. Rajan, et al. (2001), *Environmental Tax Shifting in Massachusetts – Taxes that Work for our Environment and the Economy*. With Environmental League of Massachusetts.

W. Dougherty, S. Kartha, A. Bailie, S. Bernow and S.C. Rajan (2001), *Assessment of Policies to Support Fuel Cell Buses and the Transition to the Hydrogen Economy*.

S. Bernow, R. Cleetus, and S.C. Rajan (2001), *Environmental Futures for the United States: Early Warnings and Alternative Paths*, U.S. EPA. <http://www.tellus.org/energy/publications/USAFutures.pdf>

Eberhard, A., Lazarus, M., Bernow, S., Rajan, S.C., Lefevre, T., Cabrera, M., O'earry, D., Peters, R., Svensson, B., Wilkinson, R. (2000). *Electricity Supply and Demand Side Management Options*, Thematic Review IV.1 prepared as an input to the World Commission on Dams, Cape Town, <http://www.dams.org/kbase/thematic/tr41.htm>

S.C. Rajan (2000), Energy as an Instrument for Sustainable Human Development. In *Sustainable Energy Strategies: Materials for Decision-Makers*, UNDP. Also edited entire volume.

S.C. Rajan (1999) Power sector reforms in the 1990s: The Indian Case. In AESIEAP Goldbook 2000, UK.

E. Morris and S.C. Rajan (1999), *Energy as it Relates to Poverty Alleviation and Environmental Protection*" EC/UNDP Poverty and Environment Initiative Series.

S.C. Rajan and A.K.N. Reddy (1998) *BexNet: A Sustainable Public Transport Solution for Bangalore based on the Curitiba Experience*, International Energy Initiative, Bangalore.

A.R. Shivakumar, S.C. Rajan and A.K.N. Reddy (1998) *Replication of Rural Electricity and Water Supply Utilities – Report to Rockefeller Foundation*, International Energy Initiative, Bangalore.

A.R. Shivakumar, S.C. Rajan and A.K.N. Reddy (1998) *Large-Scale Dissemination of Solar Water Heaters- An Implementation Package*, International Energy Initiative, Bangalore.

S.C. Rajan (1995) *Report on the California I/M Evaluation Program 1991-93*, California Air Resources Board Technical Report, El Monte.

S.C. Rajan (1991) *ARB/BAR 1990 random roadside survey*, California Air Resources Board Technical Report, El Monte.

S.C. Rajan (1990) *ARB/BAR 1989 random roadside survey*, California Air Resources Board Technical Report, El Monte.

D. Mackay, S.C. Rajan and Y. Rong (1988) *Expert systems and fuzzy set models as decision-making tools for regulating pesticide contamination in groundwater*, Environmental Science and Engineering Technical Report, Los Angeles.

Newspapers and Magazines

S. Byravan and S.C. Rajan (2005): "Beyond the Flood," in *New York Times*, May 9 (edit page)

S.C. Rajan (2001): "Nader here nor there," in *Indian Express*, January 3 (edit page).

S.C. Rajan (1998): "Food for thought," review of *The Great Grain Drain: An Analysis of Factors Contributing to Food Insecurity in the Developing World*, Books for Change, in *Indian Review of Books* August 16-September 15.

S.C. Rajan (1998): “South Asian Security Hinges on Welfare,” in *Times of India*, July 16 (edit page).

S.C. Rajan (1998): “Fantasies about the bomb” *The Deccan Herald*, June 14.

S.C. Rajan (1998): “Green Diplomacy,” review of Mukund Govind Rajan: *Global Environmental Politics*, Oxford University Press, in *Indian Review of Books*, May 16-June 15.

S. Byravan and S.C. Rajan (1998): “BJP Up in Arms, But Little Else,” *Times of India*, February 24 (edit page).

S.C. Rajan and A.K.N. Reddy (1997): “Regulatory Reform in the Power Sector,” *Business Line*, December 6.

S.C. Rajan and A.K.N. Reddy (1997): “Choose the Right Switch: APSEB Reforms,” *Business Line*, October 17.

S.C. Rajan (1997) “Environmental Impact Assessments -- Fundamentally Flawed,” *Hindu Survey of the Environment*.

S.C. Rajan (1997) “Millenarianist Anxiety,” review of Jagtenberg and Mckie: *Ecological Impacts and the Greening of Postmodernity*, Sage Publications, in *Indian Review of Books*, August 16-September 15.

Selected Meetings

S.C. Rajan “Automobility and discomposure in liberal ethics,” at Western Political Science Association meeting, Portland, OR, March 11-13, 2004.

S.C. Rajan “Public avenues to private spaces: Regulating the car,” at 3rd Global Conference on Ecological Justice and Global Citizenship, Copenhagen, February 12-14, 2004.

S.C. Rajan “Reforming the reforms: Learning from troubles in the power sector worldwide,” at International workshop on Options for Introducing a More Competitive Market Structure in India’s Power Sector, Agra, October 28-29, 2002.

S.C. Rajan “Automobility and the liberal disposition,” at Automobility Conference, Centre for Social Theory & Technology, Keele University, UK, 8-10th September 2002

S.C. Rajan “Sustainable transport planning” Dialogue paper by Scientific and Technological Communities at Multi-stakeholder Dialogue on Sustainable Energy and Transport, UN Commission on Sustainable Development, Session 9, United Nations, New York, April 16-18, 2001.

S.C. Rajan “Replicating the Curitiba urban transportation experience: Three types of challenges” at Workshop on Catalyzing South/South and South/North Collaborations, Center for Energy and Environmental Studies, Princeton University, December 3-5, 1998.

S.C. Rajan “The Role of Independent Democratic Regulation in the Power Sector--Some Principles,” at the 12th Conference of the Electricity Power Supply Industry, Pattaya, Thailand, November 2-5, 1998.

S.C. Rajan and A. d’Sa “Environmental impact of increased captive generation in Karnataka” at Workshop on Integrating Captive Generation and the Grid, International Energy Initiative, Bangalore, December 19, 1997.

S.C. Rajan “Environmental risks in the power sector,” at Conference on Risks in Power Projects in India, Independent Power Producers Association of India, Bangalore, June 13-14, 1997.

S.C. Rajan and A.K.N. Reddy “Institutional reform of the power sector -- towards a political solution,” at Workshop on Power Sector Crisis -- Where Does a Sustainable Solution Lie? organized by Delhi Science Forum and Working Group on Power, New Delhi, March 3-4, 1997.

S.C. Rajan “Air quality and technological potential in the automobile industry,” Army Technical Training Centre Workshop on New Environmental Perspectives for the Armed Forces, Bangalore, December 17, 1996.

S.C. Rajan “Environmental Justice After Liberalization,” J.Srinivasan Memorial Lecture, Indian Institute of World Culture, Bangalore, May 7, 1996.

S.C. Rajan and H. Mace “Diagnostics and repairs of high-emitting vehicles - results from the California I/M Evaluation Program,” Presented at the Specialty Meeting on Emissions Inventory, Air and Waste Management Association, Raleigh, North Carolina, November 1-3, 1994.

S.C. Rajan “The lure of community against a pall of pollution - automobility, smog, and the politics of resolution,” presented at the 90th Annual Meeting of the American Association of Geographers, San Francisco, March 29-April 2, 1994.

S.C. Rajan “Socio-spatial patterns of vehicle ownership in Southern California: a preliminary study,” presented at the 86th Annual Meeting of the Air and Waste Management Association, Denver, June 13-18, 1993.

R. Damle and S.C. Rajan “Need for an alternative technology education in the Third World,” presented at UNESCO Conference on Science and Technology Education in the Third World, IIT Bombay, January 17-21, 1983.

Experience

- 2001-present Senior Scientist and Senior Fellow, **Tellus Institute**, Boston. Research in the areas of institutional reform; electricity supply issues, especially renewables and air quality; biomass energy and power sector reform in developing countries, transport and land-use policy. Recent international projects include
- Team Leader, development of a tool to evaluate the effectiveness of anti-corruption measures based on institutional conditions across spheres of government, the economy and civil society. Four countries (in Africa, Latin America and South Asia) as case studies. US State Department project, 2002-2004.
 - Co-Principal Investigator, Policy Manual for Energy Sector Management Assistant Program (ESMAP) on Biomass Energy Strategies. Field trip to over 30 sites in India in May-July 2002 and interviews with over 100 manufacturers, entrepreneurs, government officials, NGOs and end-users of advanced bio-energy technologies. Prepared report in 2003 that emphasized participatory methods in bio-energy assessments and project implementation.
 - Team Leader, research on private, bilateral and multilateral sources of financing for renewable energy and energy efficiency projects in developing countries, with special emphasis on ESCO financing. Conducted interviews and meetings in 2002-2003 with key personnel in financial institutions and NGOs.
 - Principal Investigator, multiple studies on the political economy of electricity reform in developing countries. Initial work started in 1995 at the International Energy Initiative (see below), which sponsored workshop on electricity restructuring in 14 Asian countries. Most recent studies include collaborative work with World Resources Institute to examine reform processes in 6 countries and study of problems in Indian case.
- 1999-2000 Visiting Professor, Environmental Monitoring and Analysis, **Pratt Institute**, New York

- 1999-2000 Consultant to Energy and Atmosphere Programme, **UNDP**, New York. Wrote and edited a series of reports on the general theme of energy for sustainable development. Also provided supporting materials to UNDP staff, including aide memoires and commentaries for country missions. Also developed the thematic report on electricity for the World Commission on Dams.
- 1995-99 Director (Operations and Asia): Management of international non-governmental organization seeking to promote the efficient production and use of energy for sustainable development, **International Energy Initiative**, Bangalore. Supervised over 65 activities in 40 countries through a network of organizations seeking to promote the efficient production and use of energy for sustainable development. Team Leader for replicating Rural Electricity and Water Supply Utilities in eight villages in India. Initiated studies on power sector reform and implications for sustainable development.
- 1998-99 Consultant, Center for Environmental Education, Research and Advocacy, **National Law School of India University**, Bangalore. Preparation of a training curriculum on environmental law for industry.
- 1989-94 Air Resources Engineering Associate: Evaluation of California's in-use motor vehicle emissions control policies, Mobile Source Division, **California Air Resources Board**, El Monte, CA. Provided staff support to long-term evaluation of the state's motor vehicle inspection and maintenance program, including study design, analysis, reporting and staff presentations. Outputs were significant in altering the design of the state's \$200 million program over subsequent years.
- 1988-89 Air Quality Scientist: Design and development of air quality dispersion model for Santiago, Chile - **ENSR Consulting and Engineering**, Camarillo, CA.
- 1987-88 Graduate Student Assistant: Database design, **Regional Water Quality Control Board**, Los Angeles, CA.
- 1986-87 Graduate Research Assistant: Groundwater research, microcomputer-based expert systems for groundwater pesticide regulation, **Environmental Science and Engineering, UCLA**, CA.
- 1985-86 Graduate Teaching Assistant: **Atmospheric Sciences, UCLA**, CA.
- 1983-85 Graduate Research Assistant: Microphysical parameterization in cloud models, **Institute of Atmospheric Sciences, SDSM&T**, Rapid City, SD.
- 1997 - Coordinator, **Econetworth**, Network for the assessment of Third World Environmental Impact Reports (<http://www.oneworld.org/econetworth>).
- 1988-94 Member and editor: **Emergences**, journal of the group for the study of composite cultures, UCLA.
- 1986-87 Associate editor/publisher: **Vicharan**, journal of socio-political themes concerning South Asia.

Project Summary

- 2003-2004 Great Transition Initiative; developing a vision (www.gtinitiative.org)
- 2002-2004 Achieving Institutional Reform: Evaluating the Effectiveness of Anti-Corruption Policies (US State)
- 2003 World Energy Assessment: Training modules (UNDP)
- 2003 Transition to a Hydrogen Economy in the U.S. (U.S. National Renewable Energy Laboratory)

2002-2003 Biomass Energy Manual (World Bank)

2002-2003 Technical and Policy Support for Rhode Island Greenhouse Gas Mitigation Stakeholder Process (RI Department of Environmental Management)

2002-2003 Inventory of Greenhouse Gas Mitigation Funding Sources and Models (USEPA)

2002 Developing New Paradigms for Transit Research (Transit Cooperative Research Program)

2002 Development of stock-turnover energy and environment model for light duty vehicles (Energy Foundation)

2001 Reducing California's Oil Dependence (Natural Resources Defense Council)

2001 Access to regulation for utility consumers in India (USAID)

2001 Ecological Tax Reform in Massachusetts (W.A. Jones Foundation)

2000 Environmental Futures (USEPA)

2000 Power sector reform in developing countries (World Resources Institute)

1998 Energy and Poverty (UNDP)

1999 Thematic Review on Electricity to World Commission on Dams (World Commission on Dams)

1997-98 The challenge of sustainable urban transportation in Bangalore: Technology and Institutions - project manager (International Energy Initiative).

1997 International network of environmental professionals to review Environmental Impact Assessments.

1996-98 Replication of Rural Electricity and Water Supply Utilities - project manager (International Energy Initiative).

1996-98 Analysis of Large scale dissemination of Solar Water Heaters -- project manager (International Energy Initiative).

1998-99 Energy Efficient Motors and Motor Drive Systems: Materials for Dissemination (International Energy Initiative)

1995-97 Privatization and regulation in the power sector - guest editor for special issue of *Energy for Sustainable Development*.

1990-94 Public avenues to private spaces - Democratic politics and the control of automobile pollution (doctoral dissertation).

1990-94 Evaluation of the California motor vehicle emissions control inspection and maintenance program (Air Resources Board).

1990 Edited special issue of *Capitalism, Nature, Socialism* on environmentalism and the state.

1989-91 Roadside survey of motor vehicles in California for emissions and emission control systems (Air Resources Board).

- 1988-89 Integrated airshed model for Santiago - boundary layer meteorology, advection schemes and parameterization (ENSR Consulting and Engineering).
- 1987 Multimedia pesticide sampling scheme for the Mexicali Valley (graduate class project).
- 1987 Regional hydrologic impact of monsoonal climate changes: GCM and water balance simulations (research proposal).
- 1986-87 Expert system for pesticide regulation in groundwater (graduate class project).
- 1983-85 Microphysical parameterization for a 2D time-dependent cloud model (M.S. thesis).
- 1982-83 Critical design study of swept-back and swept-forward wings (B.Tech. thesis).

Other

Salzburg Seminar Fellow, 2001, Energy, Environment and Economics in Asia
Member, American Political Science Association

Languages

English, Tamil, Hindi, French