

Dr. Irving Mintzer

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Summary

- Professor of Energy, Resources, and Environment, Johns Hopkins University School of Advanced International Studies, Washington, DC
- Head, JHU SAIS Climate Finance Team
- Director and Lead Facilitator, CDP-SAIS Initiative on Closing the Investment Gap on Sustainable Infrastructure
- Facilitated year-long scenario-based exercise on the Future of the Amazonas Region of Brasil, sponsored by Eletrobras and the Federal Ministry of Mines and Energy of Brasil, with the International Institute for Education
- Facilitated year-long scenario-based exercise on the future of the light-duty transport sector in California, sponsored by the California Energy Commission and the California Air Resources Board, with the Global Business Network
- Facilitated year-long, all-of-government, scenario-based exercise on the implications of climate-change for Indonesia, initiated by the President of Indonesia sponsored by the National Economic Planning Agency (Bappenas) and supported by GIZ
- Consultant on Energy, Environment, and Security to major international energy companies and international financial institutions

Education

Ph.D. Degree in Energy and Resources <i>University of California, Berkeley, CA</i>	1983
M.B.A. Degree with concentration in Applied Economics <i>University of California, Berkeley, CA</i>	1976
B.A. Degree in Growth and Human Development <i>University of California, Berkeley, CA</i>	1971

Career History & Accomplishments

Professor, Energy, Resources, and Environment Program, Johns Hopkins School of Advanced International Studies, Washington, DC

- Design, develop, and teach courses in climate change and economic development; and climate change and national security; and climate change and finance
- Manage a large Rockefeller Foundation-funded project on Smart Power for Environmentally-Sound Economic Development
- Manage a large Rockefeller Foundation-funded project to support the engagement of the Executive Office of the UN Secretary-General with large international financial institutions

- Manage a European Climate Foundation-funded project to support the President of the UN General Assembly in his outreach to large international financial institutions 2011-present
 - Manage a Rockefeller Brothers Fund project to convene a multi-stakeholder dialogue involving senior executives of large international commercial banks, national development banks, multi-lateral banks, export credit agencies, and insurance companies designed to increase ambition and accelerate capital flows into climate-smart infrastructure
- Managing Director and Chief Strategist, Potomac Energy Fund, Frederick, MD** 2009 -2014
- Member of the Investment Committee
 - Principal responsibility for engineering, economic, regulatory, and environmental analysis of proposed investments in energy technologies
- Member of the Board of Directors, Energy Finance Company, Newport Beach, CA** 2010 -2014
- Investor’s representative on the Board
- Member of the Board of Directors, Versify Solutions, Philadelphia, PA** 2009 - 2014
- Investor’s representative on the Board
 - Member of the Strategic Advisory Board
- Principal, MEG LLC, Silver Spring, MD** 1994-present
- Responsible for technology assessment, economic modeling, and policy analysis for an energy and environmental consulting service.
 - Advise national governments and international agencies on strategies reduce vulnerability and enhance adaptive capacity to the impacts of climate change.
 - Primary clients have included: Swiss Re, TEPCO, Shell, NAPIA, UNFCCC, UNDP, UNEP, IIE, US Office of Personnel Management, Arlington Institute, Stratus Consulting; plus governments of Zimbabwe, Lithuania, Vietnam, Romania, Bulgaria, Macedonia, and Hungary.
- Senior Advisor, Assistant Secretary of Energy for Policy and International Affairs, U.S. Department of Energy, Washington, DC** 2009-2012
- Advised the Assistant Secretary on issues related to Rare Earth Elements
 - Consulted and contributed to the market dynamics analysis of the DOE Critical Materials Strategy
- Senior Advisor, Deputy Director for Energy and Environmental Security, Office of Intelligence and Counterintelligence, U.S. Department of Energy, Washington, DC** 2007-2010
- Provided advice on implications of global environmental change for US and global security with focus on strategic foresight and resilience
 - Provided advice on opportunities for cooperative activities to develop a network of international cooperation on strategic foresight and early warning of environmental risks that may rise to the level of threats to US national security.

- Consultant on Energy, Environment, and Economic Development to Bappenas, The National Development Planning Agency of Indonesia and GTZ, the German Technology Cooperation Agency, Jakarta, Indonesia** 2008-2009
- Provided advice on how to integrate considerations of clean energy and climate change into all aspects of national economic development planning
 - Advised line ministries on integrated strategies for reducing vulnerability and enhancing resilience in the energy, transport, agriculture, forestry, and health sectors as part of the national Indonesian government's Sectoral Roadmap for Low-Emissions Development
 - Provided advice on design and implementation of the Indonesia Climate Change Trust Fund
- Consultant, Energy Foundation, San Francisco, CA** 2007-2008
- Advisor to Winston Hickox, Chairman, Market Advisory Committee, California Environmental Protection Agency
 - Advisor to Alan Lloyd, Chairman, Economics and Technology Advisory Committee, CA Air Resources Board
 - Developed initial assessment of candidate early actions as mandated under AB 32, the California Global Warming Solutions Act of 2006 for possible inclusion by the Research Division, CA Air Resources Board, in the List of Discrete Early Actions (Principal contact: Doug Thompson)
- Consultant, CA Climate Action Registry, Los Angeles, CA** 2007-2008
- Prepared an international comparison of mandatory GHG monitoring and reporting regimes for the Policy and Technical Services Division, CA Air Resources Board, as required under AB 32, the California Global Warming Solutions Act of 2006 (Principal contact: Richard Corey)
- Consultant, Secretariat of the UN Framework Convention on Climate Change, Bonn, Germany** 2007
- Prepared a review and assessment of worldwide private sector investment in renewable energy technologies, energy efficiency systems, and emissions-reducing industrial technologies as input to the Executive Secretary's new initiative to promote investment in these technologies in developing countries
- Instructor, Eastern Management Development Center, US Office of Personnel Management, Shepherdstown, WV** 2002-2013
- Prepared, developed, and taught courses in energy policy and environmental policy to senior managers from various federal agencies and departments, including US DoE, USEPA, US DoD, NASA, NOAA, FERC, USDA, NRC, and DoJ.
- Adjunct Professor, International Negotiations, Johns Hopkins School of Advanced International Studies, Washington, DC** 1997-2000
- Designed, developed, and taught courses in international negotiations, focusing on complex, multi-dimensional issues, especially climate change and stratospheric ozone depletion.

Member, Global Business Network, Emeryville and San Francisco, CA 1993-2013

- Consultant to international companies and national governments on energy and environment issues; clients have included Shell International, Amerada Hess, Saudi Aramco, Tokyo Electric Power Company, and the Nuclear Waste Management Organization of Canada.
- Analyzed the implications of new or proposed legislation on strategic business decisions.
- Led efforts by the Business Council for Sustainable Energy to establish a working dialogue among business leaders, environmentalists, and government officials.
- Participated in and organized scenario planning exercises.

Senior Associate and Director of the Global Change Program, Pacific Institute for Studies in Development, Environment, and Security, Oakland, CA 1995-2004

- Responsible for raising over \$1 million to support projects related to international negotiations on climate change and sustainable development.
- Founder and co-director of the Consortium for North-South Dialogue and Partnership on Climate Change; engaged developing and industrialized country business leaders, national negotiators and experts from NGOs in multi-stakeholder dialogues; structured these dialogues to identify win-win strategies for achieving the Objective of the UN Framework Convention on Climate Change (UNFCCC).
- Lead author, Intergovernmental Panel on Climate Change.

Executive Editor, Global Change Magazine 1994-2004

- Founder, responsible for overall strategic direction and fund-raising of a graphics-intensive paper and on-line magazine distilling new developments in the science, economics, and policy response to global climate change and ozone depletion for a non-specialist audience.
- Researched and wrote feature articles; reviewed narrative and graphical content.
- Directed marketing efforts targeting US-based business executives, policy-makers, and opinion leaders.
- Prepared financial reports and performance evaluations for funders.

Director of Policy Research, Center for Global Change, University of Maryland, College Park, MD 1989-1995

- Co-founder, responsible for overall strategic direction, research coordination, and quality control for the Center.
- Shared primary responsibility for fund-raising with the Center's Executive Director, raised over \$2 million for interdisciplinary policy research and public outreach on issues related to global change.
- Prepared and delivered invited testimony to committees of the US Congress and of the Italian Parliament.
- Member of the Technical and Economic Assessment Panel of the Montreal Protocol on Substances that Deplete the Ozone Layer; consultant to ENEA (Italian Nuclear and Alternative Energy Agency) and the Banco Sao Paulo di Torino.

Coordinator, Climate Change Program, *Stockholm Environment Institute, Stockholm, Sweden* 1989-1995

- Responsible for overall strategic direction and research coordination of an international team providing support to the UN climate negotiations.
- Instigated collaborative policy exercises engaging experts and officials from developing and industrialized countries.

Founding Director of the Energy, Climate, and Pollution Program, *World Resources Institute, Washington, D.C.* 1983-1989

- Established an innovative interdisciplinary policy research program linking studies of energy, climate change, ozone depletion, and local air pollution to policy scenarios focused on economic development at the national and international level.
- Developed a collaborative approach for engaging private companies in direct dialogue with representatives of non-governmental organizations on long-term strategic issues.
- Prepared and delivered invited testimony to committees of the US Congress, the German Parliament, the British Parliament, the European Parliament, and the Brundtland Commission of the United Nations.

Academic Honors

- **Visiting Scientist, *Hungarian Academy of Sciences*** 1985
- **Visiting Scientist, *Academy of Sciences of the Soviet Union*** 1985
- **Visiting Scientist, *Royal Swedish Academy of Sciences, Beijer Institute for Energy and Human Ecology*** 1984
- **Visiting Scientist, *International Institute for Applied Systems Analysis, Laxenburg, Austria*** 1980
- **Finalist, *Fannie and John Hertz Foundation Fellowship in Applied Physics, Lawrence Livermore National Laboratory*** 1978

Editorial Board Memberships and Other Affiliations

- ***PSR Quarterly: The Journal of Physicians for Social Responsibility***
- ***Journal of Global Environmental Change: Human and Policy Dimensions***
- ***Journal of Mitigation and Adaptation Strategies for Global Change***
- **Member, The Pugwash Conferences on Science and World Affairs**

Scientific Advisory Panel Memberships

- **Intergovernmental Panel on Climate Change, Lead Author**
- **Technical and Economic Assessment Panel on the Feasibility of Expanding the Montreal Protocol on Substances that Deplete the Ozone Layer, *United Nations Environment Program***
- **Science Advisory Board Panel on the Assessment of the Risks of Stratospheric Ozone Depletion, *US Environmental Protection Agency***
- **Advisory Board for STARPOWER: The US and the International Quest for Fusion Energy, *Office of Technology Assessment, US Congress***

Other Awards and Assignments

- **Senior Special Fellow**, *United Nations Institute for Training and Research*, Geneva, Switzerland, with high-level training assignments in Bangladesh, Vietnam, and Zimbabwe. 1993-1995
- **Consultant to:** *United Nations Development Programme; United Nations Environment Program; World Bank; Global Environment Facility; United Nations Framework Convention on Climate Change; International Institute for Education; John D. and Catherine T. MacArthur Foundation, Shell International, Amerada Hess, Saudi ARAMCO, Ford Motor Company, Tokyo Electric Power Company, and EPRI.* 1993-2004
- **Extensive television experience** including appearances in the US (e.g., *Nightline with Ted Koppel* and *The Oprah Winfrey Show*), UK, Canada, Brazil, Italy, Norway, and Japan. 1984-2000
- **Invited testimony in** US Congress, European Parliament, Italian Parliament, German Parliament, and British Parliament

Selected Publications

- **“Confronting Climate Change and Reframing Security,”** Carol Dumaine and Irving Mintzer, *The SAIS Review of International Affairs*, Volume 35, Number 1, Winter-Spring 2015, Washington, DC, pp. 5-16. Winter 2015
- **“Counting the Gigatonnes: Building Trust in Greenhouse Gas Inventories from the US and China,”** Irving Mintzer, J. Amber Leonard, and Ivan Dario Valencia, *Worldwide Fund for Nature, Washington, DC* June 2010
- **“Look Before You Leap: Implications of Accelerated Commercialization of Advanced Hybrids, Plug-in Electric, and All-Electric Vehicles for Strategic Import Dependence and Passenger Safety,”** Chapter 6, in D. Sandalow, ed., *Plug-in Hybrid Electric Vehicles: The role for Washington*, published by the Brookings Institution, Washington, DC March 2009
- **Executive Editor, *Global Change Magazine*, Pacific Institute for Studies in Development, Environment, and Security, Oakland, CA** 1996-2003
- **“Who Needs What? A Survey of Capacity Building Needs in 33 Developing Countries,”** *United Nations Institute for Training and Research, Geneva, Switzerland* 2003
- ***Negotiating Climate Change: The Inside Story of the Rio Convention*, Cambridge University Press and the Stockholm Environment Institute, Cambridge, UK** 1995
- ***Implementing the Framework Convention on Climate Change: Incremental costs and the role of the GEF. Working Paper no. 3. International Bank for Reconstruction and Development, Environment Department, Washington, DC*** 1993

- *Maskell, Kathy; Callander, Bruce A.; and Irving M. Mintzer, Basic Science of Climate Change. The Lancet 342 (8878): 1027-31.* 1993
- *Crutzen, Paul J.; Georgii S. Golitsyn; and Irving M. Mintzer. Linkages between global warming, ozone depletion, acid deposition and other aspects of global environmental change; in Irving M. Mintzer and J. Amber Leonard Confronting Climate Change: Risks, Implications and Responses. Cambridge University Press.* 1992
- *Confronting Climate Change: Science, Impacts, and Responses, Cambridge University Press and the Stockholm Environment Institute, Cambridge, UK* 1992
- *Energy, greenhouse gases, and climate change. Annual Review of Energy 15 (1): 513-50.* 1990
- *Holdren, John P.; Gregory Morris; and Irving M. Mintzer. Environmental Aspects of Renewable Energy Sources. Annual Review of Energy 5 (1): 241-91. Palo Alto, CA.* 1980
- List of additional publications available upon request