

# THE NATIONAL ACADEMIES

*Advisers to the Nation on Science, Engineering, and Medicine*

## **Roundtable on Science and Technology for Sustainability Exploratory Workshop on Environmental Regulation and its Alternatives June 14, 2004**

### **Panelists Biosketches**

**Braden R. Allenby** is professor of civil and environmental engineering, and of law, at Arizona State University. Until 2004, he was the Environment, Health and Safety Vice President for AT&T. He is the inaugural Batten Fellow at Darden Graduate School of Business at the University of Virginia, and a Fellow of the Royal Society for the Arts, Manufactures & Commerce. He has been an adjunct professor at Princeton Theological Seminary, the University of Virginia School of Engineering, Columbia University's Department of International and Public Affairs, and Yale University's School of Forestry and Environmental Studies. From 1995 to 1997, he was Director for Energy and Environmental Systems at Lawrence Livermore National Laboratory, and from 1991 to 1992 was the J. Herbert Holloman Fellow at the National Academy of Engineering in Washington, DC. He graduated cum laude from Yale University in 1972, received his Juris Doctor from the University of Virginia Law School in 1978, his Masters in Economics from the University of Virginia in 1979, his Masters in Environmental Sciences from Rutgers University in 1989, and his Ph.D. in Environmental Sciences from Rutgers in 1992. He has authored or co-authored a number of books, including *Industrial Ecology: Policy Framework and Implementation* (1999) and *Industrial Ecology* (2<sup>nd</sup> ed, 2004), as well as numerous book chapters and articles on design for environment, industrial ecology, and related policy issues, and serves on the editorial boards of a number of journals. He is currently a member of the AAAS Committee on Science, Engineering and Public Policy, and the President-Elect of the International Society for Industrial Ecology.

**Patrick R. (Pat) Atkins** is responsible for Alcoa's environmental policy and global environmental programs. He serves on various lead teams and chairs global advisory committees that provide input to Alcoa's corporate environment, health and safety programs. Dr. Atkins joined Alcoa in Pittsburgh in 1972, after serving as a professor in Environmental Health Engineering at the University of Texas at Austin where he taught engineering, industrial hygiene and ecology courses and directed MS and PhD research projects. He became manager-environmental control at Alcoa in 1973, director-environmental control in 1980, director of environmental affairs in 1991 and to his present position in 1995. He also served as Alcoa's chief environmental engineer from 1982 to 1984.

Author of over 50 technical articles and editor of two books, Dr. Atkins is a member of the American Society of Civil Engineers, the National Society of Professional Engineers and the Engineering Society of Western Pennsylvania. He represents Alcoa on the environmental committees of the International Primary Aluminum Institute, the Business Roundtable, National Association of Manufacturers and other national and international groups. In addition, he is a member of the National Academy of Sciences Commission on Geosciences, Environment and

Resources. Dr. Atkins is a registered professional engineer in the states of Texas and Pennsylvania and is an adjunct professor at the University of Pittsburgh Graduate School of Public Health, teaching industrial waste treatment technology.

Dr. Atkins received a bachelor's degree in civil engineering from the university of Kentucky in 1964 and master of science in environmental engineering from Stanford University a year later. He also earned a doctor of philosophy degree in 1968 from Stanford specializing in environmental engineering.

**Leslie Carothers** is President of the Environmental Law Institute. ELI is an independent, non-partisan education and research organization working to protect the environment by improving law, policy, and management.

She has been a professional environmentalist for over 30 years. Before her election as ELI president in June 2003, she served for 11 years as Vice President, Environment, Health and Safety at United Technologies Corporation (UTC) in Hartford, a diversified manufacturer of products for the aerospace and building systems markets. She also served as Commissioner of the Connecticut Department of Environmental Protection from 1987-1991 and Senior Environmental Counsel for PPG Industries, a manufacturing company in Pittsburgh, from 1982-1987. She began her environmental career with the federal Environmental Protection Agency in the air pollution program in Washington in 1971 and later served as Enforcement Director, Deputy Regional Administrator, and Acting Regional Administrator of EPA's New England Region in Boston.

She is a graduate of Smith College and Harvard Law School and also holds a Masters Degree in environmental law from George Washington University. In 1991, she was an adjunct lecturer on environmental regulation at the Yale School of Forestry and Environmental Studies.

She is a past member and Chair of the Board of Directors of the Connecticut Audubon Society and the Environmental Law Institute and a past member of the Board of the Nature Conservancy (Connecticut Chapter). She currently serves on the Board of Directors of Strategies for the Global Environment (Pew Center on Global Climate Change).

**David J. C. Constable** is currently the Director of Sustainable Development in the Environmental Product Stewardship Team, Corporate Environment, Health and Safety, at GlaxoSmithKline. In this role David is responsible for championing Sustainable Development and shares responsibility for developing programs, systems, tools and methodologies that integrate Sustainability, Life Cycle Inventory/Assessment, Total Cost Assessment, Green Chemistry and Green Technology activities into existing R&D and Worldwide Supply business processes.

David joined SmithKline Beecham's Environmental Research Laboratory in 1991 to assist in the development of a variety of fate, effects and treatability data for drug substances in SB's portfolio. Prior to joining SB, David worked for ICI Americas as a Group Leader in the SHEA Analytical Services group where he developed a variety of non-routine air sampling methodologies

David obtained a Ph.D. in Analytical Chemistry from the University of Connecticut in Storrs, CT, USA and a B.S. in Environmental Sciences, Air and Water Pollution from Slippery Rock University, Slippery Rock, PA, USA.

**John C. Dernbach** is director of the Pennsylvania Department of Environmental Protection's (DEP) Office of Policy. DEP's Office of Policy identifies key issues, coordinates the development of regulations and policy initiatives, tracks and reviews all proposed rulemakings, and helps to provide long-range direction on a broad range of departmental goals and objectives. From 1981 to 1993, Dernbach held various posts with DEP's precursor, the Department of Environmental Resources, wrapping up his tenure there as director of the Advanced Science and Research Team.

Dernbach also has been a professor at Widener University Law School since 1993, teaching classes in environmental law, international environmental law, property and administrative law and conducting seminars on global warming and sustainability. He also has extensive international environmental law experience, serving as a visiting lecturer at the University of Geneva's Graduate Institute of International Studies in Geneva, Switzerland, in 2003; at Macquarie University Law School in Sydney, Australia, in 1999; and at the University of Nairobi Law School in Nairobi, Kenya, in 1996. He is the editor of *Stumbling Toward Sustainability* (Environmental Law Institute, 2002), a comprehensive assessment of U.S. sustainable development efforts over the past decade. Dernbach attended the University of Wisconsin-Eau Claire, graduating summa cum laude and receiving his bachelor's degree in science in 1975. Dernbach received his juris doctor from the University of Michigan Law School in 1978, graduating cum laude.

**Paul Gilman** is Assistant Administrator for Research and Development at the U.S. Environmental Protection Agency. In April 2002, Dr. Paul Gilman was sworn-in to serve as the Assistant Administrator for the Office of Research and Development which is the scientific and technological arm of the Environmental Protection Agency. In May 2002, he was appointed the Agency Science Advisor. In this capacity, he will be responsible for working across the Agency to ensure that the highest quality science is better integrated into the Agency's programs, policies and decisions.

Before his confirmation, he was Director, Policy Planning for Celera Genomics in Rockville, Maryland. Celera Genomics, a bioinformation and drug discovery company, is known for having decoded the human genome. In his position Dr. Gilman was responsible for strategic planning for corporate development and communications.

Prior to joining Celera, Dr. Gilman was the Executive Director of the life sciences and agriculture divisions of the National Research Council of the National Academies of Sciences and Engineering. The National Research Council is the operating arm of the National Academies which were chartered to provide independent advice to the government in matters of science and engineering. Dr. Gilman's divisions focused on risks to health and the environment, protection and management of biotic resources, and practical applications of biology including biotechnology and agriculture.

Before joining the National Research Council, Gilman was the Associate Director of the Office of Management and Budget (OMB) for Natural Resources, Energy, and Science. There he coordinated budget formulation, regulatory, and legislative activities between agencies such as the Environmental Protection Agency, National Science Foundation, Agriculture, and Energy with the Executive Office of the President.

Dr. Gilman served as Executive Assistant to the Secretary of Energy for technical matters before joining the OMB. His responsibilities included participating in policy deliberations and tracking implementation of a variety of programs including the Department's environmental remediation and basic science research.

Gilman has 13 years of experience working on the staff of the United States Senate. He began that time as a Congressional Science Fellow sponsored by the American Association for the Advancement of Science in the office of Senator Pete V. Domenici. Later, as the Staff Director of the Subcommittee on Energy Research and Development, he was involved in the passage of the Nuclear Waste Policy Act of 1982 and oversight of energy technology and environmental research. Later he served as the chief-of-staff for Senator Domenici.

Dr. Gilman matriculated at Kenyon College in Ohio and received his A.B., M. A., and Ph.D. degrees in ecology and evolutionary biology from Johns Hopkins University, Baltimore, Maryland.

**Thomas Graedel** is Professor of Industrial Ecology at Yale University. His research is centered on developing and enhancing industrial ecology, the organizing framework for the study of the interactions of the modern technological society with the environment. His textbook, *Industrial Ecology*, co-authored with B.R. Allenby of AT&T, was the first book in the field and he has followed it with three others: *Design for Environment*; *Industrial Ecology and the Automobile*; and *Streamlined Life-Cycle Assessment*. His current interests include studies of the flows of materials within the industrial ecosystem and the development of analytical tools to assess the environmental characteristics of products, processes, the service industry, and urban infrastructures. Dr. Graedel was elected to the U.S. National Academy of Engineering for "outstanding contributions to the theory and practice of industrial ecology" in 2002. Dr. Graedel served on the National Academies' Commission on Geosciences, Environment, and Resources; Committee on Grand Challenges in the Environmental Sciences; Committee on the Industrial Environment Performance Metrics: Opportunities and Challenges; and the Board on Atmospheric Sciences and Climate. Dr. Graedel received a B.S. from Washington State University, an M.A. from Kent State University, and an M.S. and Ph.D. from the University of Michigan.

**Dr. Karl Hausker** is a Senior Adviser to Environmental Resources Trust ([www.ert.net](http://www.ert.net)) and Enterprising Environmental Solutions ([www.eesi21.org](http://www.eesi21.org)). He is also a Principal at the Global Environment and Technology Foundation ([www.getf.org](http://www.getf.org)) and has co-chaired the Mayors' Asia Pacific Environmental Summit since its inception in 1999 ([www.environmentalsummit.com](http://www.environmentalsummit.com)). From 2000 to 2003, he was a Managing Consultant with the PA Consulting Group, a worldwide consulting firm providing services in the areas of environmental protection, energy,

transportation, and water. During 1999, he was a Senior Visiting Fellow at the Tata Energy Research Institute (TERI) in New Delhi where he conducted work on climate change, and other energy and environmental issues. From 1995 to 1998, he directed environmental projects at the Center for Strategic and International Studies (CSIS) in Washington D.C. He directed the Enterprise for the Environment (a consensus-building project on U.S. domestic environmental policy chaired by Bill Ruckelshaus), Climate Change Roundtables, and Sustainable Development Roundtables. He remains an Adjunct Fellow at TERI and CSIS.

From 1993 to 1995, Dr. Hausker served as the Deputy Assistant Administrator in the Office of Policy, Planning and Evaluation, U.S. Environmental Protection Agency where he led the Agency's climate programs. From 1987 through 1992, Dr. Hausker was the Chief Economist for the U.S. Senate Committee on Energy and Natural Resources. Prior to joining the Committee, Dr. Hausker was an Associate at Putnam, Hayes and Bartlett, an economic and management consulting firm, where he specialized in electric utility regulatory issues. He has also worked for the U.S. Department of Energy and the California Public Utilities Commission. Dr. Hausker received a B.A. in Economics from Cornell University, and an M.P.P and Ph.D. in Public Policy from the University of California at Berkeley.

**Sharon Hayes** is Director of the Water Policy Staff at the EPA, where she has spent fifteen years serving as a manager in the Pollution Prevention Division, Senior Economist in EPA's Denver Office, and a Special Assistant to EPA Administrator Carol Browner, among other positions. She interrupted her EPA career to work as Global Director of Environmental Affairs for the Dole Food Company for several years, returning to EPA in February of 2003. Ms. Hayes is an economist by training, and taught economics (including Economics and Environmental Policy) for the University of Maryland and George Mason University.

Ms. Hayes has specialized knowledge of regulatory development in the water, toxics, pesticides, and air programs; pollution prevention and sustainable development; economic incentives and voluntary programs (e.g. Environmental Management Systems); and has won numerous awards at EPA. Under her leadership, the Dole Food Company was recognized as having the top environmental program in the food industry, and as one of the top ten most socially responsible Fortune 500 companies by the non-profit group Council for Economic Priorities. Ms. Hayes has also served as a member of the Advisory Board of Social Accountability International.

**Alan D. Hecht** is Director for Sustainable Development in the U.S. Environmental Protection Agency's Office of Research and Development. He served as Director for International Affairs at the National Security Council and Associate Director for Sustainable Development at the White House Council on Environmental Quality (2002-2003). Hecht participated in both the 1992 Earth Summit in Rio and the 2003 World Summit on Sustainable Development in Johannesburg. His most recent publication on sustainable development is in the Environmental Law Institute's magazine *The Environmental Forum* (September/October 2003).

Spanning a federal career of 29 years, Hecht previously served as the Principal Deputy and Deputy Assistant Administrator for International Activities at the U.S. EPA (1989-2001). He was the Acting Assistant Administrator for International Activities from 1992-1994. Hecht served in

science and policy positions with the National Oceanographic Administration (1982-1989) and the National Science Foundation (1976-1982). He was Director of the National Climate Program from 1981 to 1989, and Director of the Climate Dynamics Program at NSF from 1976 to 1981. Hecht has a BS (Geology) from Brooklyn College (Brooklyn, New York) and a Ph.D. from Case Western Reserve (Cleveland, Ohio). He has published numerous technical reports, edited two books on paleoclimatology and served as Chief Editor for journals of the American Meteorological Society.

**DeWitt John** is Director of the Environmental Studies Program at Bowdoin College Brunswick, Maine, and teaches courses on environmental policy and politics, climate policy, and fisheries. He has written four books including *Civic Environmentalism* and *A Brighter Future for Rural America?* In 1992-80, while Director of the Center for the Economy and the Environment at the National Academy of Public Administration, he led three extensive studies of EPA and innovative approaches to environmental management, including *Environment.gov: Transforming Environmental Protection for the 21<sup>st</sup> Century* (2000). Other work at NAPA focused on suburban sprawl, marine sanctuaries, the federal role in economic and community development, and other topics. He has also worked in state government, including serving as Director of the Colorado Division of Mines and as policy director for the governor of Colorado. He has a Ph.D. in political science from the University of Chicago.

**Gerald T. Keusch** is Assistant Provost of the Medical Campus and Associate Dean of the School of Public Health at Boston University. Dr. Keusch is a graduate of Columbia College and Harvard Medical School, and he is Board Certified in Internal Medicine and Infectious Diseases. He has been involved in clinical medicine, teaching and research for his entire career, most recently as Professor of Medicine at Tufts University School of Medicine and Senior Attending Physician and Chief of the Division of Geographic Medicine and Infectious Diseases, at the New England Medical Center in Boston, MA. His research has ranged from the molecular pathogenesis of tropical infectious diseases to field research in nutrition, immunology, host susceptibility, and the treatment of tropical infectious diseases and HIV/AIDS. Prior to joining NIH as Associate Director for International Research and Director of the Fogarty International Center in October 1998, he was a Faculty Associate at Harvard Institute for International Development and Director of the Health Office.

Dr. Keusch is the author of over 300 original publications, reviews and book chapters, and he is the editor of 8 scientific books. He is the recipient of the Squibb, Finland and Bristol awards of the Infectious Diseases Society of America, and has delivered numerous named lectures including the Health-Clark Lecture at the London School of Hygiene and Tropical Medicine, the Wesley Spink Lecture at the University of Minnesota, and the William Kirby Lecture at the University of Washington. He is involved in international health research and policy issues within the NIH, the Institute of Medicine, and the World Health Organization. Under his leadership, the programs of the Fogarty International Center have greatly expanded to address not only the pressing global issues in infectious diseases and the growing burden of non-communicable diseases, but also the critical cross-cutting issues such as the ethical conduct of

research, intellectual property rights and global public goods, stigma, and the impact of improved health on economic development.

**Keith Laughlin** became president of Rails-to-Trails Conservancy (RTC) in February 2001. RTC is a national organization dedicated to converting unused rail lines into multipurpose trails. Keith has more than 25 years of policy and management experience in Washington, D.C.

He served for eight years in the White House Council on Environmental Quality as Associate Director for Sustainable Development. In that capacity, he was the White House liaison to the President's Council on Sustainable Development; directed Vice President Al Gore's Reinventing EPA initiative; and was the executive director of the White House Task Force on Livable Communities.

Before joining the executive branch, Keith was a senior staff person in the U.S. House of Representatives for 14 years. During that time, he was chief of staff to Rep. Howard Wolpe (D-MI); an associate staff member of the House Budget Committee; executive director of the Northeast-Midwest Congressional Coalition; and staff director of the Subcommittee on Investigations and Oversight of the House Science Committee.

He lives in Washington, DC with his wife and two children.

**Pamela A. Matson** is Naramore Dean of the School of Earth Sciences and Goldman Professor of Environmental Science at Stanford University. Her current research interests include biogeochemical processes in forest and agricultural systems. Dr. Matson was the first to show that geographic variation in biogeochemistry of terrestrial ecosystems controls variation in the production of the important greenhouse gas N<sub>2</sub>O. That discovery provided the foundation for her development of global budgets of natural and anthropogenic sources of this and other radiatively significant trace gases. Dr. Matson has served on numerous National Academies' committees, including the Board on Sustainable Development, the Committee on Research and Peer Review in EPA, the Board on Global Change, and others. She is President of the Ecological Society of America, a member of the Aspen Global Change Institute Advisory Board, and a member of the Institute of Ecosystem Studies Advisory Board. Selected publications include *Ecosystem Approach for the Development of a Global Nitrous Oxide Budget; Agricultural Intensification and Ecosystem Properties*; and *Integration of Environmental, Agronomic, and Economic Aspects of Fertilizer Management*. Dr. Matson received her B.S. in Biology from the University of Wisconsin – Eau Claire; her M.S. in Environmental Science from Indiana University; and her Ph.D. in Forest Ecology from Oregon State University.

**David Rejeski** directs the Project on Foresight and Governance at the Woodrow Wilson International Center for Scholars and is an affiliated adjunct staff member at RAND. Most recently, he was a Visiting Fellow at Yale University's School of Forestry and Environmental Studies and an agency representative (from EPA) to the White House Council on Environmental Quality (CEQ). Before moving to CEQ, he worked at the White House Office of Science and Technology Policy (OSTP) on a variety of technology and R&D issues, including the

development and implementation of the National Environmental Technology Strategy. Prior to his time at OSTP, he was head of the Future Studies Unit at the Environmental Protection Agency. He spent four years in Hamburg, Germany, working for the Environmental Agency, Department of Public Health, and Department of Urban Renewal and co-directed a non-profit involved in renewable energy technologies. He has graduate degrees in public administration and environmental design from Harvard and Yale.