Proposal: EPA Science Advisory Board (SAB) 2008 Workshop; Science for Environmental Protection: Directions for the Future (Date to be determined: ~September 30, 2008 ± 2-3 days)

Overview:

EPA Science Advisory Board (SAB) 2008 Workshop Science for Environmental Protection: Directions for the Future

(Date to be determined ~September 30, 2008 ± 2-3 days)

Workshop objectives

- Mark the 30-year anniversary of the federally chartered SAB by looking at past, present, and future environmental challenges and the roles of science and science advice.
- Stimulate SAB consideration of future report(s) on science priorities for meeting future challenges.

Background

The workshop will observe the 30th anniversary of the SAB, established in its current form in 1978 by the Environmental Research, Development, and Demonstration Authorization Act (ERDDAA). In addition, it will build on current advice regarding EPA's strategic research directions to look at key future science issues for EPA and approaches for addressing them.

This one-day public session will precede either a public chartered SAB advisory meeting that would allow for SAB discussion of implications of the workshop for SAB advice on EPA research needs *or* a closed SAB administrative meeting for chartered SAB discussion of implications of the workshop for future SAB practices.

Planning group formed at December 2007 SAB meeting: Drs. Granger Morgan, James Bus, Virginia Dale, George Lambert, Jill Lipoti, Jana Milford, Rebecca Parkin, David Rejeski, Joan Rose, Kerry Smith, Thomas Theis.

Proposed workshop structure (all plenary sessions)

Opening
- Welcome
- Introduction to purpose of workshop

Morning presentations and discussions:
- Three one-hour sessions devoted to science topics.
    - Format for science topic sessions:
        - 30-minute talk from an external speaker,
        - two 5-minute reflections presented by SAB members; and
        - 20 minutes of open discussion
    - Each invited speaker will discuss a major science topic and be asked to address a short list of key issues for which the SAB believes EPA will need to provide a policy response over the years 2008-2013. Speakers will be asked to talk specifically about the state of knowledge and research priorities to support policy development. Speakers will be asked to provide a list of key resources as background reading.

Lunchtime speaker addressing future science issues and globalization of science

Afternoon presentations and discussions:
- Three one-hour sessions devoted to science topics (format same as morning sessions)
- Panel discussion among past SAB Chairs on the roles of science and science advice in meeting environmental challenges
- Concluding remarks from Workshop Chair

Draft Agenda

U. S. Environmental Protection Agency Science Advisory Board (SAB) Workshop

Date to be Determined - ~September 30, 2008 ± 2-3 days

Science for Environmental Protection: Directions for the Future TBD, Washington, DC

Purpose: To mark the 30-year anniversary of the federally chartered SAB by looking at past, present, and future environmental challenges, examine the role of science and science advice and stimulate SAB consideration of the development of future report(s) on science priorities for meeting future challenges.

9:00 - 9:05	Welcome Purpose of Workshop and Agenda Overview	Dr. M. Granger Morgan, Chair, SAB
9:05 – 10:05	Air Quality	Speaker TBD SAB Members TBD, Discussants Open Discussion
10-05 – 11:05	Water Quality and Safe Drinking Water	Speaker TBD SAB Members TBD, Discussants Open Discussion
11:05 – 11:20	Break	
11:20 – 12:20	Future of Chemical Health Evaluation	Speaker TBD SAB Members TBD, Discussants Open Discussion
12:20 – 1:45	Lunch Speaker: Future Environmental Science Issues and Globalization	Speaker TBD
1:45 – 2:45	Climate	Speaker TBD SAB Members TBD, Discussants Open discussion
2:45 – 3:45	Ecosystems	Speaker TBD SAB Members TBD, Discussants Open Discussion
3:45 – 4:00	Break	
4:00 - 5:00	Sustainability	Speaker TBD SAB Members TBD, Discussants Open Discussion
5:00 – 6:00	Panel Discussion: Past, Present, and Future Directions for EPA Science and Science Advice – Views of Past SAB Chairs	SAB Chairs
6:00	Summary and Adjourn	

List of Agenda Science Topics, Likely Issues for Policy Agenda 2008-2013, Candidate Speakers

Science Topic	Likely issues for policy agenda (2008-2013)	Candidate Speakers (Final agenda would include one speaker per science topic from this candidate list
Air Quality	1. Sources and chemistry of organic aerosols 2. Global-scale transport, and material mass balance 3. Radiate properties of fine particles in the planetary energy balance 4. Likely impact of climate change on tropospheric air pollution 5. Advanced methods for air quality measurement and source apportionment	Dr. Spyros Pandis, CMU Dr. John Seinfield, Caltech
Water Quality and Safe Drinking Water	1. Watershed Reclamation and recycling (merging the CWA and SDWA) 2. Impacts of animal manure (AG) Water/ land-water interfaces 3. Climate variability and water resources (feast and famine) 4. Aquatic ecosystem disruption 5. Monitoring the water environment (emerging contaminants and water security) 6. Technology innovation (new, safe, proven, What is BAT?) 7. Consideration of water quality and quantity at multiple scales (esp. over large areas) 8. Effects of land use and land management	Dr. Sandra Batie, Michigan State University Dr. Janet Hering, Caltech Dr. David Marks, MIT Dr. Betty Olson, University of California Irvine Dr. Catherine Peters, Princeton Dr. MaryLynn Yates, University of California, Riverside.
Future of Chemical Health Evaluation	1. Given the 2007 National Academy of Sciences reports , *Toxicity Testing in the 21st Century: A Vision and Strategy* and *Applications of Toxicogenomic Technologies to Predictive Risk Assessment*, implications of a potential shift from longer-term animal assays to toxico-genomic studies 2. Impact of science on fundamental assumptions and policy positions guiding toxicity testing and risk assessment practices, such as use of Maximum Tolerated Dose (MTD) animal testing and assumption of no threshold for genotoxic carcinogens 3. Future of animal testing	Dr. John Balbus, Environmental Defense Dr. Francis Collins, Director, National Human Genome Research Institute, National Institutes of Health Dr. Leroy Hood, Institute for Systems Biology, University of Washington Dr. Daniel Krewski, University of Ottawa (Chair, NAS Toxicity Testing report) Dr. Scott Noesen, Dow Chemical.

Climate	1. What is the status of knowledge about aerosol forcing and how soon are we likely to better resolve associated uncertainties? 2. How well is down-scaling likely to work to give insight about precipitation and drought? 3. What is the current state of understand of the interaction between climate change and regional air pollution? What do we need to improve that knowledge? 4. What are we likely to be able to say about sea-level rise over the coming decade (i.e., what will it take to learn how fast we are losing Greenland ice). 5. How well will GCM's and other modeling efforts likely be able to assess the secondary and indirect impacts of possible planetary-scale geoengineering.	Dr. Rosina M. Bierbaum, University of Michigan Dr. David Keith, University of Calgary Dr. Steven Schneider, Stanford Dr. Robert Watson, World Bank
Ecosystems	1. How do ecosystem services relate to EPA mission to protect the environment? 2. How would ecosystem services be measured?	Dr. Patrick Mulholland, Oak Ridge National Laboratory Dr. Peter Groffman, Institute of Ecosystem Studies Dr. Peter Kareiva, The Nature Conservancy Dr. James R. Karr, University of Washington Dr. William Mitsch, The Ohio State University Dr. Sanjayan Muttulingam, The Nature Conservancy Dr. Mary Santelmann, Oregon State University Dr. John Wiens, The Nature Conservancy
Sustainability	1. How can the dynamic, and long-term, interactions between human societies and natural systems be incorporated into models and concepts of sustainability? 2. What are the right metrics, and how can they be determined, for characterizing sustainable policy directions? 3. On what do the vulnerability and resilience of human-natural systems depend? How are these distributed geographically and/or by specific types of ecosystems and human livelihoods? 4. Can scientifically meaningful limits be defined that would provide effective warning of conditions beyond which human-natural systems incur significant risk of serious	Dr. Paul Anastas, Yale University Mr. Ray Anderson, Interface Carpet Dr. Heriberto Cabezas, Chief, Sustainable Environments Branch, USEPA, Cincinnati Dr. William Clark, Harvard University

	degradation? 5. What types of incentive methodologies--including markets, rules and regulations, and norms--can most effectively improve social capacity to guide human-natural systems on more sustainable trajectories? 6. How can today's monitoring and measurement methods for environment and society be integrated and extended to provide better guidance for more sustainable policy decisions? 7. How can today's relatively independent activities involving research, planning, observation, assessment, and decision support be better integrated into systems for adaptive management and societal learning?	Dr. Gretchen Daily, Stanford University Dr. Thomas Graedel, Yale University Dr. Robert Kates, Initiative on Science and Technology for Sustainability (ISTS) Mr. William McDonough, Stanford.

Anastas,Paul

Yale University

Dr. Paul Anastas is a Senior Research Fellow at Harvard's Center for International Development, Director of the Green Chemistry Institute in Washington, D.C., and a Roy Fellow at the Environment and Natural Resources Program at Harvard's Kennedy School of Government. He was Assistant Director for Environment at the White House Office of Science and Technology Policy (OSTP) from 1999-2004 where his responsibilities covered a wide range of environmental science issues including furthering international public-private cooperation in areas of science for sustainability such as Green Chemistry. Anastas served as the Chief of the Industrial Chemistry Branch of the U.S. Environmental Protection Agency (EPA) from 1989-1998. During that period he was responsible for regulatory review of industrial chemicals under the Toxic Substances Control Act and the development of rules, policy and guidance. In 1991, he established the industry-government-university partnership Green Chemistry Program, which was expanded to include basic research, and the Presidential Green Chemistry Challenge Awards. Prior to joining the EPA, he worked as an industrial consultant to the chemical industry in the development of analytical and synthetic chemical methodologies. Anastas received his MA and PhD in Organic Chemistry from Brandeis University and his BS in Chemistry from the University of Massachusetts at Boston.

Anderson,Ray

Interface, Inc.

Mr. Ray Anderson founded Interface, Inc. in 1973, a commercial floor covering company that produced America's first free-lay carpet tiles. He served as co-chairman of the President's Council on Sustainable Development during the Clinton administration; was recognized by Mikhail Gorbachev with a Millennium Award from Global Green in September 1996; receivedin 1996 the Ernst & Young Entrepreneur of Year for the Southeast Region and in 1997 as the Georgia Conservancy's Conservationist of the Year. Mr. Anderson's honors also include the prestigious George and Cynthia Mitchell International Prize for Sustainable Development, presented in 2001; the SAM-SPG Sustainability Leadership Award of 2001; the U.S. Green Building Council's Inaugural Leadership Award, 2002; and the National Wildlife Federation Conservation Achievement Award for Corporate Leadership, 2002. Mr. Anderson was named a Senior Fellow and Leading Voice for Green and Sustainable Design by the Design Futures Council in 2003, and also received the IIDA Star Award. In 2004, he was honored with the National Ethics Advocate Award from The Southern Institute for Business and Professional Ethics. In 2005 he received the Harvard Business School Atlanta Alumni Club's Community Leadership Award, as well as a Corporate Ally Award from Possible Woman Enterprises. Mr. Anderson is an industrial engineer and graduate of the Georgia Institute of Technology. He serves on the boards of The Natural Step, USA; The Georgia Conservancy; Upper Chattahoochee Riverkeeper; Ida Cason Callaway Foundation; Rocky Mountain Institute; the University of Texas Center for Sustainable Development, and is an honorary advisor to the President of Peking University. He holds honorary doctorates from Northland College (public service), LaGrange College (business), N.C. State University (humane letters) and University of Southern Maine (humane letters).

Balbus,John

Environmental Defense

A physician and public health professional, Dr. John Balbus works and consults on a broad range of environmental health issues, including air pollution, built environment and health, climate change, nanotechnology, toxicology, and antibiotic resistance. Prior to joining Environmental Defense, Dr. Balbus was on the faculty at the George Washington University Schools of Medicine and Public Health and Health Services, where he was founding director of the Center for Risk Science and Public Health and founding co-director of the Mid-Atlantic Center for Children's Health and the Environment. Board certified in both Internal and Occupational and Environmental Medicine, Dr. Balbus combines experience as a clinician with expertise in environmental health sciences. He is currently a member of the National Academy of Science Board on Environmental Studies and Toxicology, the Institute of Medicine Roundtable on Environmental Health Sciences, Research and Medicine, and the EPA Children's Health Protection Advisory Committee.He holds an M.P.H. from Johns Hopkins University; M.D., University of Pennsylvania; A.B., Harvard University.Recent publications include "Transportation and Health" (book chapter in Environmental Health, from Global to Local, Frumkin H., ed., 2005); "Getting it Right the First Time: Developing Nanotechnology While Protecting Workers, Public Health and the Environment" (Annals New York Academy of Sciences, 2006); "Ushering in the new toxicology: toxicogenomics and the public interest" (Environmental Health Perspectives, 2005); and "Human Health and Global Climate Change: A Review of Potential Impacts in the United States" (Prepared for the Pew Center on Global Climate Change, December 2000).

Batie,Sandra

Michigan State University

Dr. Batie has been the Elton R. Smith Professor in Food and Agricultural Policy, in the Department of Agricultural Economics at Michigan State University since 1993. She received her baccalaureate degree in economics from the University of Washington in 1967, and earned her M.S. and Ph.D. degrees at Oregon State University in agricultural economics with a specialty in natural resource economics, graduating in 1973.Dr. Batie research projects include (a) implementation of agro-environmental water quality standards, (b) corporate environmental management strategies in the agricultural sector and (c) examining the influence of agricultural contractual arrangements on producer's financial and environmental performance. Dr. Batie has served on committees of the National Academy of Science, Board of Agr iculture, and the Office of Technology Assessment; and she was a trustee of both Winrock International and the International Rice Research Institute. She is currently Chairman of the Board of Trustees of Winrock International. Dr. Batie has also traveled internationally with different delegations; her most recent trips have been to Nicaragua, Western Europe, and Africa. She has served on the Board of Directors and as president of both the American Agricultural Economics Association and the Southern Agricultural Economics Association.

Bierbaum,Rosina

University of Michigan

Dr. Rosina Bierbaum currently serves as the vice chair of the United Nations Scientific Expert Group on Climate Change; as a trustee of the University Corporation for Atmospheric Research (UCAR); and as a board member for the American Association for the Advancement of Science; the Federation of American Scientists; the Energy Foundation; and the Environmental and Energy Study

Institute. She is also a member of the International Advisory Board for the journal "Frontiers in Ecology and the Environment"; the National Research Council's Board on Atmospheric Sciences and Climate; the Design Committee for the Heinz Center's "The State of the Nation's Ecosystems" project, the Selection Committee for the Tyler Prize; the Aldo Leopold Leadership Program advisory committee, and the advisory board for the National Ecological Observatory Network (NEON). On campus, she co-chairs the University of Michigan's Sustainability Task Force, chairs the Deans' Council of the Graham Environmental Sustainability Institute, and is part of the oversight committee developing a certificate program in Science, Technology and Public Policy. Governor Granholm appointed her to serve on the State's Task Force on Chronic Wasting Disease in Cervids in 2003.She received a Ph.D. Ecology and Evolution, 1985, State University of New York, Stony Brook;; B.S. Biology, 1974, B.A. English, 1974, Boston College.

Cabezas,Heriberto

EPA

Dr. Heriberto Cabezas is Chief, Sustainable Environments Branch, Sustainable Technology Division, National Risk Management Research Laboratory, U.S. Environmental Protection Agency. Research activities include leadership of the Sustainability Theory Research Team involving the development of a mathematical theory of sustainable systems drawing on principles from physics and ecology and development of a model food web including a Lotka-Voterra type mathematical model for the population dynamics of the system. Development of a hypothesis for a criteria defining sustainable systems based on Information Theory.He holds a Ph.D. in Chemical Engineering, University of Florida (1985); M.S. in Chemical Engineering, University of Florida (1981); and B.S. in Chemical Engineering (Magna Cum Laude), New Jersey Institute of Technology (1980) .

Clark,William

Harvard University

Dr. William C. Clark is the Harvey Brooks Professor of International Science, Public Policy, and Human Development. Trained as an ecologist, his research focuses on the interactions of environment, development, and security concerns in international affairs. Clark is coauthor of Adaptive Environmental Assessment and Management and coeditor of Sustainable Development of the Biosphere; The Earth as Transformed by Human Action; Learning to Manage Global Environmental Risks; and Global Environmental Assessments: Information and Influence. Clark is a member of the U.S. National Academy of Sciences and cochaired the National Research Council study on Our Common Journey: A Transition Toward Sustainability. He chairs the environmental reporting program of the Heinz Center for Science, Economics, and the Environment, which produces a periodic report on The State of the Nations Ecosystems. Clark is a recipient of the MacArthur Prize, the Humboldt Prize, and the Kennedy School's Carballo Award for Excellence in Teaching.

Collins,Francis

National Human Genome Research Institute

Dr. Collins earned a B.S. in chemistry at the University of Virginia in 1970 and a Ph.D. in physical chemistry at Yale University in 1974. He then enrolled in medical school at the University of North Carolina, where he earned an M.D. in 1977. From 1978 to 1981, Collins served a residency and chief residency in internal medicine at North Carolina Memorial Hospital in Chapel Hill. He then returned to

Yale, where he was named a Fellow in Human Genetics at the medical school from 1981 to 1984. During that time, he developed innovative methods of crossing large stretches of DNA to identify disease genes.He joined the University of Michigan in 1984 and later became Professor of Internal Medicine and Human Genetics,. In 1993, Dr. Collins became director of the National Center for Human Genome Research, which became NHGRI in 1997. As director, he oversees the International Human Genome Sequencing Consortium. In 1994, Collins founded NHGRI's Division of Intramural Research (DIR), an intramural program of genome research that has developed into one of the nation's premier research centers in human genetics.

Daily,Gretchen

Stanford University

Dr. Gretchen C. Daily is Bing Interdisciplinary Research Scientist in the Department of Biological Sciences at Stanford University. An ecologist by training, Dr. Daily is working to develop a scientific basis - and political and institutional support - for managing Earth's life support systems. Her efforts span basic science, environmental policy analysis, teaching, and public education. Dr. Daily's primary scientific efforts concern the future course of extinction, the resulting changes in the delivery of ecosystem services, and novel opportunities for biodiversity conservation. She is developing ways of forecasting changes in biodiversity and certain ecosystem services, based on countryside biogeography (with her own field sampling mostly in Costa Rica and Mexico), remote sensing, and theoretical modelling. With other scholars, Dr. Daily is also developing an interdisciplinary framework for evaluating and influencing human impacts on the environment. The framework integrates key aspects of the natural and social sciences, especially economics.Dr. Daily was granted the Frances Lou Kallman Award for Excellence in Science and Graduate Study (1992). She was then named a Pew Fellow in Conservation and the Environment (1994), a fellow of the Aldo Leopold Leadership Program (1999), and a recipient of the 21st Century Scientist Award (2000). She has served on a subcommittee of the Presidential Committee of Advisors on Science and Technology (1997-98) and on numerous other panels and committees for the United Nations, the World Bank, private foundations, and scientific institutions.Dr. Daily has published over 100 scientific and popular articles. Her third book, coauthored with Katherine Ellison, is in press (The New Economy of Nature: The Quest to Make Conservation Profitable, Island Press, Washington, D.C.). Her other books are Nature's Services: Societal Dependence on Natural Ecosystems (Daily, G., Ed., 1997, Island Press) and The Stork and the Plow: The Equity Solution to the Human Dilemma (Ehrlich, P., A. Ehrlich, and G. Daily, 1995, Putnam Press).

Graedel,Thomas

Yale University

Dr. Thomas E. Graedel is Clifton R. Musser Professor of Industrial Ecology, and a professor in the departments of chemical engineering and geology and geophysics. In the 11 books and over 250 technical papers he has authored or coauthored, Graedel has provided both the perspective and techniques to help industrial operations design processes and manufacture products in such a way as to minimize and optimize their environmental interactions. These include the textbook "Industrial Ecology," first published in 1995 and soon to be released in an expanded second edition; three related books -- "Design for the Environment," "Industrial Ecology and the Automobile" and "Streamline Life-Cycle Assessment; and "Atmosphere, Climate, and Change," which won the American Meteorological Society's Louis J. Battan Author's Award in 1995. He is coauthor of the forthcoming book "Atmospheric Corrosion." Graedel's

environmental assessment matrix, which he developed for AT&T Bell Laboratories, is now a standard industrial tool for streamlined life cycle assessments of the environmental impacts of products, processes and facilities. With colleagues, he has also characterized regional and global cycles for such technologically important resources as copper and zinc, and his techniques for developing cycles for the stocks and flows of materials provide a new basis for assessments of resource sustainability, environmental impacts over time and related policy initiatives. A graduate of Washington State University, Graedel earned an M.A. in physics from Kent State University and an M.S. and Ph.D. in astronomy from the University of Michigan. He was a member of AT&T Bell Laboratories' technical staff from 1969 to 1996 and was named a "Distinguished Member" of the staff in 1984. Graedel has been a named lecturer at Washington State University, York University in Toronto, the University of Virginia and the University of Florida. A member of numerous professional organizations, he is a fellow of Pierson College.

Groffman,Peter M.

Institute of Ecosystem Studies

Dr. Peter M. Groffman is currently a Senior Scientist at the Institute of Ecosystem Studies in Millbrook, NY; with research interests in ecosystem, landscape and microbial ecology, with a focus on carbon and nitrogen dynamics. He received his Ph.D in 1984 in Ecology from the University of Georgia. Specific recent research efforts include investigation of; the effects of atmospheric nitrogen deposition on nitrogen gas fluxes (EPA STAR Grant), nitrate dynamics in riparian buffer zones (USDA NRICGP, EPA), snow depth as a regulator of soil freezing and nitrogen dynamics (NSF), effects of a whole watershed calcium addition on soil nitrogen and carbon cycling (NSF), carbon and nitrogen cycling in urban watersheds and ecosystems (NSF LTER) and the effects of exotic earthworm invasion on soil nitrogen and carbon cycling (NSF). Groffman is a member of the Steering Committee for the Workshop on Advanced Approaches to Quantify Denitrification (NSF funded), the U.S. National Committee for Soil Science, the Hubbard Brook Research Foundation Nitrogen Scientific Working Group, the NOAA Gulf of Mexico Hypoxia Nutrient Reduction Workgroup, the Working Group on Aquatic Terrestrial Biogeochemistry at the National Center for Ecological Analysis and Synthesis (NCEAS), the Working Group on Trace Gas Fluxes at NCEAS, and the Expert Group on N2O and CO2 Emissions from Agricultural Soils, IPCC-Organization for Economic Cooperation and Development (OECD) Programme on National Greenhouse Gas Inventories. He was a lead author for the Second (Wetlands) and Third (North America) Assessment Reports of the Intergovernmental Program on Climate Change (IPCC). He currently serves on the editorial boards of Ecology and Ecosystem and was chair of the Soil Ecology section of the Ecological Society of America from 1997 – 98 and the Wetland Soils Section of the Soil Science Society of America from 2002 - 2003.

Hering ,Janet

California Institute of Technology

Dr. Janet Hering is Executive Officer for Keck Laboratories and Professor of Environmental Science & Engineering at California Institute of Technology. Her research interests include: biogeochemical cycling of trace metals and metalloids: microbial redox cycling; field studies of metal redox cycling, mobilization, and sequestration; mineral weathering and reactions at mineral surfaces: mechanisms and kinetics of dissolution and precipitation reactions; macroscopic, spectroscopic, and modeling studies of sorption processes; and water treatment processes for removal of inorganic contaminants: role of sorption in contaminant removal; design of novel sorbents.She

holds a Ph.D., Massachusetts Institute of Technology; A.M. Harvard University, and A.B., Cornell University.

Hood,Leroy

Institute for Systems Biology

Dr. Leroy Hood's research has focused on the study of molecular immunology, biotechnology, and genomics. His professional career began at Caltech where he and his colleagues pioneered four instruments — the DNA gene sequencer and synthesizer, and the protein synthesizer and sequencer — which comprise the technological foundation for contemporary molecular biology. In particular, the DNA sequencer has revolutionized genomics by allowing the rapid automated sequencing of DNA, which played a crucial role in contributing to the successful mapping of the human genome during the 1990s. In 1992, Dr. Hood moved to the University of Washington as founder and Chairman of the cross-disciplinary Department of Molecular Biotechnology. In 2000, he co-founded the Institute for Systems Biology in Seattle, Washington to pioneer systems approaches to biology and medicine. Most recently, Dr. Hood's lifelong contributions to biotechnology have earned him the prestigious 2004 Biotechnology Heritage Award, and for his pioneering efforts in molecular diagnostics the 2003 Association for Molecular Pathology (AMP) Award for Excellence in Molecular Diagnostics. In 2006 he received the Heinz Award in Technology, the Economy and Employment for his extraordinary breakthroughs in biomedical science at the genetic level. In 2007 he was elected to the Inventors Hall of Fame (for the automated DNA sequencer). He has published more than 600 peer-reviewed papers, received 14 patents, and has co-authored textbooks in biochemistry, immunology, molecular biology, and genetics and is just finishing a text book on systems biology. In addition, he coauthored with Dan Keveles a popular book on the human genome project-The Code of Codes. Dr. Hood is a member of the National Academy of Sciences, the American Philosophical Society, the American Academy of Arts and Sciences, the Institute of Medicine and the National Academy of Engineering. Indeed, Dr. Hood is one of 7 (of more than 6000) scientists elected to all three academies (NAS, NAE and IOM). Dr. Hood has also played a role in founding more than 14 biotechnology companies, including Amgen, Applied Biosystems, Systemix, Darwin and Rosetta. He is currently pioneering systems medicine and the systems approach to disease.

Kareiva,Peter

The Nature Conservancy

Dr. Peter Kareiva's career spans 20 years as a university professor and 3 years working on salmon conservation for NOAA Fisheries. His past publications and research have concerned such diverse fields as mathematical biology, fisheries science, insect ecology, risk analysis, genetically engineered organisms, agricultural ecology, population viability analysis, behavioral ecology, landscape ecology, and global climate change. Peter maintains connections with several universities, and still advises students, as well as teaching courses on occasion. Dr. Kareiva's scientific research at TNC focuses on exploring conservation's unintended consequences and how to remedy them. In addition, Dr. Kareiva is exploring the development of credible tools that allow routine consideration of nature's assets (or ecosystem services) in a way that informs the choices we make everyday at the scale of local communities and regions, all the way up to nations and global agreements. He holds a Pd D from Cornell University in Ecology and Evolutionary Biology. He currently holds the position of Chief Scientist & Director of Science at The Nature Conservancy.

Karr,James R

University of Washington

Dr. James R. Karr is professor of aquatic and fishery sciences, professor of biology, and adjunct professor of civil and environmental engineering, environmental health, and public affairs at the University of Washington, Seattle. He received his Ph. D. in ecology from the University of Illinois, Urbana-Champaign. He held faculty appointments at Purdue University, University of Illinois, and Virginia Tech University and was deputy director and acting director at the Smithsonian Tropical Research Institute in Balboa, Panama. He has taught and done research in tropical forest ecology, ornithology, stream ecology, watershed management, landscape ecology, conservation biology, ecological health, and science and environmental policy. He is a fellow in the American Association for the Advancement of Science and the American Ornithologists' Union and received the 2004 Carl R. Sullivan Fishery Conservation Award from the American Fisheries Society and the 2005 Environmental Stewardship Award from the North American Benthological Society. He has written more than 300 scholarly articles, books, reports, book reviews, and popular essays on ecology and environmental policy. He developed the index of biotic integrity (IBI) to directly evaluate the effects of human actions on the health of living systems. His current primary concern is to improve the use of biological information in the decision making process of society. Protection of the well-being of human society requires more sophisticated use of ecological, especially biological, knowledge to protect human society from the effects of ecological decline.

Kates,Robert

Initiative on Science and Technology for Sustainability (ISTS)

Dr. Robert Kates trained as a geographer and taught geography for many years at Clark University in Worcester, MA, USA. He also participated in interdisciplinary programs addressing both environment and development at the University of Dar as Salaam in Tanzania, Clark University, and at the World Hunger Program at Brown University in Providence, Rhode Island, USA. Kates now serves as a Research Associate at Harvard and co-convener of the Steering Group for the Initiative on Science and Technology for Sustainability. Kates served as chair of the Coordinating Committee on a Transition toward Sustainability following the National Academy of Sciences' report, Our Common Journey: A Transition Toward Sustainability. His current research is on long-term trends and values, attitudes and beliefs affecting a sustainability transition -- e.g., see "What is Sustainable Development? Goals, Indicators, Values, and Practice" (Kates et al., 2005) and "Do Global Attitudes and Behaviors Support Sustainable Development?" (Leiserowitz, Kates and Parris, 2005). His most recent books include the co-authorship of Great Transition: The Promise and Lure of the Times Ahead (2002), and with the AAG Global Change in Local Places Research Group, Global Change in Local Places: Estimating, Understanding, and Reducing Greenhouse Gases (2003).

Keith,David

University of Calgary

Dr. David Keith works near the interface between climate science, energy technology and public policy. His technical and policy work addresses the capture and storage of CO2, the economics and climatic impacts of large-scale wind power, the use of hydrogen as a transportation fuel, and the technology and implications of geoengineering. Keith has served as a member of several advisory boards and panels including Canada's 'blue ribbon' Panel on Sustainable Energy Technology (report) and as a member of U.S. National

Academy committees. He currently serves on Canada's Capture and Storage Task Force, and is one of the world's energy experts named by national science academies to the InterAcademy Council study on Transitions to Sustainable Energy Systems. Keith has addressed technical audiences with articles in Science and Nature; he has consulted for national governments, industry and environmental groups, and has reached the public through national media in Canada and the U.S. As an undergraduate, Keith took first prize in Canada's national physics prize exam. As a graduate student, he won MIT's biennial departmental prize for excellence in experimental physics, and most recently he was named Environmental Scientist of the Year by Canadian Geographic in 2006 (article). Keith spent most of his career in the U.S. at Carnegie Mellon, Harvard and the National Center for Atmospheric Research. He returned to Canada in 2004 to build a research group on energy and environmental systems in Calgary, Alberta.

Krewski,Daniel

University of Ottawa

Dr. Daniel Krewski is currently Professor of Medicine and Professor of Epidemiology and Community Medicine at the University of Ottawa, where he is involved in a number of activities in population health risk assessment within the new Institute of Population Health. Dr. Krewski has also served as Adjunct Research Professor of Statistics in the Department of Mathematics and Statistics at Carleton University since 1984. Prior to joining the Faculty of Medicine at the University of Ottawa in 1998, Dr. Krewski was Director, Risk Management in the Health Protection Branch of Health Canada. Dr. Krewski joined the Health Protection Branch of Health Canada in 1972, and has extensive experience with a wide variety of health protection issues, particularly in relation to food safety and environmental health. While with Health Canada, he also served as Director of the Bureau of Chemical Hazards and as Chief of the Biostatistics Division in the Environmental Health Directorate. Dr. Krewski obtained his Ph.D. in statistics from Carleton University and subsequently completed an M.H.A. at the University of Ottawa. His professional interests include epidemiology, biostatistics, risk assessment, and risk management. Dr. Krewski is a Fellow of the American Statistical Association and the Society for Risk Analysis. Dr. Krewski has contributed to over 300 publications in the scientific and technical literature, and is author or editor of five books. He is currently an Associate Editor of Risk Analysis, Risk Abstracts, and the Journal of Epidemiology and Biostatistics. Dr. Krewski has been a member of a number of expert panels on health risk assessment, including committees established by the American Health Foundation, the International Life Sciences Institute, the the International Programme on Chemical Safety. From 1992 to 1996, Dr. Krewski served as the Canadian representative on the Scientific Council of the International Agency for Research on Cancer. He currently serves as a member of the Board on Environmental Studies and Toxicology within the U.S. National Academy of Sciences, and has recently been appointed Chair of the Royal Society of Canada's Expert Panel on the Potential Health Risks of Exposure to Radiofrequency Fields from Wireless Telecommunications Devices.

Marks,David

MIT

Dr. David Marks received his Ph.D. in Environmental Engineering from the Johns Hopkins University. His expertise is in how large-scale infrastructure systems are organized and managed, with special concern for anticipating and mitigating larger scale, environmental and economic impacts. Much of Dr. Marks' work is based on large-scale computer-based simulation and optimization modeling to help

illuminate conflicts between competing objectives, goals, interest groups, and governmental organization. This work led to contributions in large-scale environmental systems, multi-objective analysis under uncertainty, and in new methods for increasing the interaction between scientific and technical knowledge and the difficult, diffuse, decision-making process involved in environmental management. Within the United States, he has been instrumental in work on large-scale infrastructure renewal, the clean up of hazardous wastes, and the provision of safe drinking water.Dr. Marks has worked closely with groups at MIT in the understanding of the interface between science, technology and society. This includes being a former director and co-director of MIT's Laboratory for Energy and the Environment and a founding member of the Technology, Management and Policy Program and MIT's Engineering Systems Division. He teaches and advises in the MIT Technology and Policy Program.

McDonough,William

William McDonough + Partners

Mr. William McDonough is a world-renowned architect and designer and winner of three U.S. presidential awards: the Presidential Award for Sustainable Development (1996), the National Design Award (2004); and the Presidential Green Chemistry Challenge Award (2003). Time magazine recognized him as a “Hero for the Planet” in 1999, stating that “his utopianism is grounded in a unified philosophy that – in demonstrable and practical ways – is changing the design of the world.” Mr. McDonough has been a leader in the sustainable development movement since its inception. He designed and built the first solar-heated house in Ireland in 1977 while still a student at Yale University and designed the first "green office" in the U.S. for the Environmental Defense Fund in 1985. Mr. McDonough was commissioned in 1991 by the City of Hannover to write The Hannover Principles: Design for Sustainability, the official design guidelines for the 2000 World's Fair, which the City presented to the 1992 U.N. Earth Summit in Brazil. He and German chemist Dr. Michael Braungart co-authored Cradle to Cradle: Remaking the Way We Make Things (North Point Press, 2002), which has now been published in German, Italian, Spanish, Chinese, and Korean translations. The two were also the subject of a 2001 documentary video, The Next Industrial Revolution, from Earthome Productions.Mr McDonough is founder and principal of two design firms. William McDonough + Partners, Architecture and Community Design, has created numerous landmarks of the sustainability movement since 1981, designing homes, offices, corporate campuses, academic buildings, communities, and cities. McDonough Braungart Design Chemistry (MBDC) employs a comprehensive Cradle to Cradle design protocol to chemical benchmarking, supply-chain integration, energy and materials assessment, clean-production qualification, and sustainability issue management and optimization. Mr. McDonough and his firms have received numerous national and international architectural, environmental, industrial and design awards for their work.A recognized leader in sustainable design and development, Mr. McDonough writes and speaks extensively on his design philosophy and practice. Mr. McDonough is Consulting Professor of Civil and Environmental Engineering at Stanford University, U.S. Chair of the Board of Councilors of the China-U.S. Center for Sustainable Development, and Chair of the Board of Overseers for the Center for Eco-Intelligent Management at the Instituto de Empresa in Madrid. He is a board member for The H. John Heinz III Center for Science, Economics and the Environment, as well as the Management Committee of HRH The Prince of Wales’s Business & The Environment Programme at Cambridge University. Mr McDonough is a venture partner with VantagePoint Venture Partners, a $2.8 billion global technology venture capital firm with a dedicated CleanTech practice group. From 1994-1999, Mr. McDonough was the Edward E. Elson Professor of Architecture and Dean of the School of Architecture at the University of Virginia.

Mitsch,William

The Ohio State University

Dr. William Mitsch is a professor of natural resources and environmental science and director of the Olentangy River Wetland Research Park at The Ohio State University in Columbus. In 2004, Professor Mitsch and Dr. Sven Erik Jørgensen, a professor of environmental chemistry at the Danish University of Pharmaceutical Sciences in Copenhagen, Denmark, were awarded the Stockholm Water Prize for their pioneering development and global dissemination of ecological models of lakes and wetlands, widely applied as effective tools in sustainable water resource management. Their theoretical and applied work on lake and wetland ecosystems, management of lake and wetland water quality, and lake, river and wetland conservation, restoration and usage has been acknowledged and implemented in both developing and developed countries.Dr. Mitsch was the inspiration behind the Olentangy River Wetland Research Park at The Ohio State University, a world-class wetland research and education facility. There, among other focus areas, research on the ecological restoration of the Mississippi-Ohio-Missouri Basin is being spearheaded. To help reduce coastal pollution in the northern Gulf of Mexico, the ultimate depository of the Mississippi, he has also taken the role as leader in the debates, studies and resolutions dealing with coastal wetland losses in the U.S. state of Louisiana. He has also shown that constructed wetlands can be engineered for use as buffering and purification systems, as has Dr. Jørgensen, who for the last nine years has been responsible for a project in Tanzania to develop better knowledge of such systems. In practical terms, artificial wetlands can be ideal for use as an inexpensive, final stage in the domestic wastewater treatment process – an approach which could have significant meaning for the developing world.

Muttulingam,Sanjayan

The Nature Conservancy

Dr. Sanjayan completed his Ph.D at the University of California, Santa Cruz, where he did his thesis work on genetics and demography with Dr Michael Soule, one of the founding fathers of the field of Conservation Biology. After a short stint at the World Bank, Sanjayan joined The Nature Conservancy in 1999, first as the Director of Science for the California Program, and later was named one of three Lead Scientists for the organization as a whole. Dr. Sanjayan's past work has focused on conservation genetics, conservation planning, wildlife corridors, wildlife sampling, conservation policy, and conservation measures. He has a faculty appointment at University of Montana where he occasionally teaches graduate seminar classes. Sanjayan's current interest focuses on two areas: First, Sanjayan's work attempts to understand the complex relationship between poverty alleviation and conservation and how some basic services provided by nature (ecosystem services) play a role in both human well-being and conservation. Second, Dr. Sanjayan works with scientists and conservationists in Africa to develop a better understanding of poorly known ecoregions and of specific threats such as climate change and private land development that pose significant challenges to successful conservation. He is currently a lead scientist at The Nature Conservancy.

Noesen,Scott

Dow Chemical Company

Jim Bus will provide Dr. Noesen's biosketch. 2/26/08

Olson,Betty

U.C. Irvine

Dr. Betty Olson's research expertise is in molecular techniques, as well as the microbiology of drinking and waste waters. Her interests cover the use of molecular biological techniques to optimize wastewater treatment, the study of microorganisms of public health importance in environmental waters, and how microorganisms influence water quality. Prior to joining the Civil and Environmental Engineering department, Dr. Olson was a professor in the Department of Environmental Health, Science, and Policy and Environmental and Community Medicine at UC Irvine. She writes: "My interests focus on molecular biological techniques and microorganisms of public health importance and on how these organisms relate to water quality and environmental clean-up. My primary focus over the last several years has been concerned with bacteriological quality of drinking and environmental waters. Another focus of interest centers on the transformation and translocation of organic and inorganic pollutants in soil and aquatic environments. My laboratory is currently investigating molecular methods of differentiation between human and animal E. coli; the effect of recharging with waters of debilitated quality on assimilable organic carbon levels in surface waters; analysis of soil microbial community structure using classical and molecular methods. "Dr. Olson holds a:Ph.D. in Environmental and Biomedical Sciences, University of California, Berkeley; M.S., Environmental and Biomedical Sciences, University of California, Berkeley; and B.S., Biological Sciences, University of California,

Pandis,Spyros

Carnegie Mellon University

Dr. Spyros Pandis is the Elias Professor of Chemical Engineering and Engineering and Public Policy in Carnegie Mellon University. He received a Diploma for the University of Patras in Greece in 1986 and a Ph.D from the California Institute of Technology in 1990. Both degrees are in Chemical Engineering. He joined the faculty of Carnegie Mellon University in 1993. His research includes theoretical and experimental studies of atmospheric chemistry as it relates to urban and regional pollution, acid rain and topics related to global climate change. Professor Pandis has published more than 80 reviewed articles and a book on atmospheric chemistry and air pollution. He is the recipient of the US National Science Foundation Career Award (1995), the Ladd Award for Excellence in Research (1995), the Benjamin Teare Award for Excellence in Education (1998) and the Ken Whitby Award (2000). He has served in NRC committees reviewing Air Quality Management in the US and the DOE office of Fossil Energy air quality research. He is currently the Principal Investigator of the Pittsburgh EPA Particulate Matter Supersite Project.

Peters,Catherine

Princeton University

Dr. Catherine A Peters holds a Ph.D. from Carnegie Mellon University in Civil Engineering, Engineering and Public Policy. Her research interests focus on Geological storage of CO2 in deep saline aquifers and the geochemical reactions that are important in this context, reactive transport modeling and pore-scale network modeling to simulate geochemcial reactions and reaction rate upscaling in porous media, the impacts of stress on microbiological metabolic processes. Stress induced by exposure to xenobiotic chemicals such as

environmental pollutants and Biodegradation kinetics for polycyclic aromatic hydrocarbons, and the relationships between molecular properties and these kinetics. Currently, Dr. Peters is the Associate Dean of Academic Affairs at the School of Engineering and Applied Science at Princeton University.

Santelmann,Mary

Oregon State University

Dr. Mary Santelmann is currently the Director of the Water Resources Graduate Program and Research Faculty at the Department of Geosciences Oregon State University. Academically, she holds three degrees: PhD in Ecology University of Minnesota, Minneapolis, MN, M.S. in Biology University of Michigan, Ann Arbor, MI and B.S. in Botany University of Minnesota, Minneapolis, MN (Honors College). In addition to her affiliation at the Water Resources Graduate Program, she is a member of International Association for Landscape Ecology, American Water Resources Association, Society of Wetland Scientists, British Ecological Society, Ecological Society of America and The Nature Conservancy. Her current research includes Ecosystem response to human land use and management practices; Environmental and anthropogenic influences on species composition and species richness in agricultural, urban and wetland ecosystems and Ecology and biogeochemistry of wetlands and riparian systems.

Schneider,Stephen

Stanford University

Dr. Stephen H. Schneider is a professor in the Department of Biological Sciences, a Senior Fellow at the Center for Environment Science and Policy of the Institute for International Studies, and Professor by Courtesy in the Department of Civil and Environmental Engineering at Stanford University since September, 1992. He was honored in 1992 with a MacArthur Fellowship for his ability to integrate and interpret the results of global climate research through public lectures, seminars, classroom teaching, environmental assessment committees, media appearances, Congressional testimony, and research collaboration with colleagues. He has served as a consultant to Federal Agencies and/or White House staff in the Nixon, Carter, Reagan, Bush Sr., Clinton and Bush Jr. administrations. He also received, in 1991, the American Association for the Advancement of Science/ Westinghouse Award for Public Understanding of Science and Technology, for furthering public understanding of environmental science and its implications for public policy. In 1998 he became a foreign member of the Academia Europaea, Earth and Cosmic Sciences Section. He was elected Chair of the American Association for the Advancement of Science's Section on Atmospheric and Hydrospheric Sciences (1999-2001). Schneider was elected to membership in the U.S. National Academy of Sciences in April 2002. Schneider's current global change research interests include: climatic change; global warming; food/climate and other environmental/science public policy issues; ecological and economic implications of climatic change; integrated assessment of global change; climatic modeling of paleoclimates and of human impacts on climate, e.g., carbon dioxide "greenhouse effect" or environmental consequences of nuclear war. He is also interested in advancing public understanding of science and in improving formal environmental education in primary and secondary schools. He was a Coordinating Lead Author in Working Group II of the Intergovernmental Panel on Climate Change (IPCC) (under the auspices of the World Meteorological Organization and the United Nations Environment Program) from 1997-2001, and was a Lead Author in Working Group I from 1994-1996. He was also a lead author of the IPCC guidance paper on uncertainties. He is currently a co-anchor of the

Key Vulnerabilities (including Article 2) Cross-Cutting Theme for the Fourth Assessment Report (AR4) of the IPCC.

Seinfeld,John

California Institute of Technology

Dr. John Seinfeld is the Louis E. Nohl Professor and Professor of Chemical Engineering at the California Institute of Technology. He received his Ph.D. in Chemical Engineering from Princeton University and joined the faculty at Caltech in 1967. His honors and awards include the elected membership in the National Academy of Engineering, 1982; Fellow of the American Academy of Arts and Sciences, 1991; Award for Creative Advances in Environmental Science and Technology, American Chemical Society, 1993; the Fuchs Award, International Aerosol Research Assembly, 1998; the Warren K. Lewis Award, American Institute of Chemical Engineers, 2000; and the Nevada Medal, 2001. He is the recipient of honorary doctorates from the University of Patras (Greece) and Carnegie Mellon University. He leads the John Seinfeld Research Group which conducts research in atmospheric science that involves laboratory experiments, field measurements, and theoretical modeling.

Watson,Robert

University of East Anglia

Dr. Robert Watson joined the World Bank as Senior Scientific Advisor in the Environment Department in 1996, became Director of the Environment Department and Head of the Environment Sector Board in 1997 and is currently the Chief Scientist and Senior Adviser for Sustainable Development. Dr Watson received a PhD in Chemistry from London University in 1973. He has received awards for his contributions to science, including the American Association for the Advancement of Science Award for Scientific Freedom and Responsibility in 1993 and the insignia of Honorary Companion of St Michael and St George from the British Government in 2003. Prior to joining the World Bank, Dr Watson was Associate Director for Environment in the Office of the President of the United States in the White House and prior to that, Director of the Science Division and Chief Scientist for the Office of Mission to Planet Earth at the National Aeronautics and Space Administration (NASA).He was Chairman of the Global Environment Facility's Scientific and Technical Advisory Panel from 1991 to 1994, Chair of the Intergovernmental Panel on Climate Change (IPCC) from 1997 to 2002 and Board co-chair for the Millennium Ecosystem Assessment from 2000 to 2005. He is currently Director of the International Assessment of Agricultural Science and Technology for Development and co-chair of the International Scientific Assessment of Stratospheric Ozone. He has been Chair or co-chair of other international scientific assessments, including the IPCC Working Group II, the United Nations Environment Programme/World Meteorological Organization (UNEP/WMO), and the UNEP Global Biodiversity Assessment.

Wiens,John

The Nature Conservancy

Following degrees from the University of Oklahoma and the University of Wisconsin-Madison (M.S., Ph.D.), he joined the faculty of Oregon State University and, subsequently, the University of New Mexico and Colorado State University, where he was a University Distinguished Professor. His work, which has emphasized landscape ecology and the ecology of birds and insects in arid environments, has led to over 200 scientific papers and 7 books. John left academia in 2002 to join The Nature Conservancy as a Lead Scientist, with

the challenge of putting years of classroom teaching and academic research into conservation practice in the real world. His current scientific work at TNC addresses the critical issue of conservation in a rapidly changing world – “conservation futures.” Most conservation aims to protect and maintain the places that plants and animals need in order to persist and flourish. But these places and the surrounding environments are undergoing extraordinary changes. Climate change, economic globalization, changing land use, and increasing demands on natural ecosystems to provide goods and services are changing the ways in which people relate to nature, and conservation must adapt to this changing context. He is currently a lead scientist at The Nature Conservancy.

Yates,Marylynn

UC Riverside

Dr. Marylynn Yates conducts research in the area of water and wastewater microbiology. Her research focuses on assessing the potential for the contamination of water by human pathogenic microorganisms. As the intentional use of reclaimed water and biosolids (which may contain pathogenic microorganisms) increases, it is necessary to understand the potential impacts of these practices on public health. Specific areas of research include: 1) developing and improving methods to detect microorganisms in environmental samples (e.g., water, wastewater. biosolids, and soil) using both traditional cultural methods as well as molecular methods such as immunomagnetic separation polymerase chain reaction; 2) developing methods to assess the vulnerability of ground water to fecal contamination using bacteriophages; 3) examining the factors that control the persistence of pathogenic microorganisms in the environment; 4) assessing the potential for microbial contamination of ground water using both laboratory soil columns and field tracer studies; 5) assessing the efficacy of water, wastewater, and biosolids treatment processes to inactivate pathogenic microorganisms; and 6) assessing the potential for the use of mathematical models to predict the survival and transport of microorganisms in soil-water systems. She holds her Ph.D from The University of Arizona, 1984. Presently, Dr. Yates is Professor of Environmental Microbiology at UC Riverside.

Invitees

- SAB Staff Office has budget to support 50 SAB, CASAC, and Council travelers and other invited guests from outside the Washington DC area

- Invited Participants (Including Chartered SAB Members and SAB Committee Members) to include

    - SAB members (FY 2008 and 2009)
    - CASAC Members (FY 2008 and 2009)
    - Speakers
    - Past SAB Chairs
    - Others to be added, as resources permit, identified by the planning group from the sectors below:
        - other federal agencies
        - other federal advisory committees
        - scientific advisory committees from other countries or international organizations
        - state and local governments
        - non-governmental organizations
        - professional associations
        - think-tanks
        - trade associations and private sector
        - academic institutions and centers

Schedule Leading to Workshop

	Task	**By when**
1.	Obtain concurrence from Chartered SAB on general plan	February 28, 2008
2.	Extend invitation from SAB chair to speakers and set workshop date based near end of fiscal year (~September 30, 2008 ± 2-3 days), based on speakers' availability	March 30, 2008
3.	Secure facility and arrange logistics	April 15, 2008
4.	Follow-up with invited speakers to request the following information by mid- September before the workshop - request short biosketch - request short abstract for talk - request list of key source materials for workshop participants - request slides for presentation 1 week before workshop	April 30, 2008
5.	Issue formal invitations to other attendees	April 30, 2008
6.	Design materials for attendees	May 30, 2008
7.	Arrange travel	June-July 2008
8.	Assembly of workshop materials and provision of any reading material provided by speakers before the workshop	September 18, 2008

Strategy for Documenting the Workshop

- Planning Group will seek opportunities for a news item in *Environment, Science & Technology* or *Environmental Health Perspectives* and explore other opportunities for news items that would have a broader audience.

- SAB Staff Office-developed workshop report

    - Format:

    1. Workshop Background and Objectives
    2. Speakers biosketches, abstracts and slides presentations from talks, brief summary of discussion of questions and answers
    3. Brief summary of past chairs' panel discussion

    Appendices

    List of key resources provided by workshop speakers for each major agenda topic