

10th National Conference
on Science, Policy and the Environment

PROGRAM



The New
Green Economy

ALIGNING: SCIENCE | EDUCATION | MARKETS



January 20-22, 2010

Ronald Reagan Building and International Trade Center

1300 Pennsylvania Avenue, NW
Washington, DC



National Council for Science and the Environment
Improving the scientific basis for environmental decisionmaking

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10th National Conference on Science, Policy and the Environment
The New Green Economy

AGENDA

**Note: Sessions Located in Atrium Hall Unless Otherwise Noted*

Wednesday, January 20, 2010

Workshop locations around downtown Washington, DC

- 9:00 am Council of Energy Research and Education Leaders (CEREL) Meeting (members only)
9:00 am -
5:00 pm Skill Building Workshops (*Full-Day, Morning-Only and Afternoon-Only Sessions*)

Thursday, January 21, 2010

Ronald Reagan Building and International Trade Center

- 8:00 am Registration, Exhibition and Scientific Poster session open; Continental Breakfast (*Atrium*)
8:45 am Keynote Addresses: The New Green Economy: (How) Can We Get There From Here?
10:15 am Plenary Roundtable: Growing the Green Economy or Greening the Grown Economy?
11:15 am Plenary Roundtable: How Can Science, Technology, and Education Help to Green the Economy?
12:15 pm Lunch on your own – Breakout Session leaders will meet in International Gateway room
1:30 pm Breakout Sessions (*concurrent sessions – see program for locations*)
5:30 pm NCSE Lifetime Achievement Award- *Herman Daly, University of Maryland*
5:50 pm Recognition of Generation Green Youth Essay Awards
6:00 pm 10th John H. Chafee Memorial Lecture on Science and the Environment - A New American Environmentalism and the New Economy, *James Gustave Speth, Demos, New York City*
7:00 pm Reception
8:30 pm Student and Young Professional Networking Expedition

Friday, January 22, 2010

Ronald Regan Building and International Trade Center

- 8:00 am Continental Breakfast (*Atrium*)
8:45 am Moderated Roundtable: The New Green Economy: Moving from Theory to Action
10:15 am Symposia I (*concurrent sessions*)
11:45 am Buffet Lunch (with youth mentoring tables), Launch of *Solutions Journal*
1:15 pm Symposia II (*concurrent sessions*)
3:15 pm Closing Discussion: Progress of the Obama Administration in Moving Toward a Green Economy – *How are we doing? What else is needed?*
4:30 pm Adjourn

**Note: Detailed agendas for each day can be found on pages 4, 22 and 42.*



UPS is proud to support the 10th National Conference on Science, Policy and the Environment: *The New Green Economy*.

The heart of UPS

UPS believes that the responsibility to protect our earth lies in each of us and with all of us. UPS has long been sensitive to our environmental impact and introduced our first electric vehicle as early as 1936. Still today, we're committed to a number of sustainable efforts to reduce our carbon footprint, including precise dispatch planning, the use of alternative fuel vehicles, comprehensive recycling programs and fuel conservation initiatives.

UPS has recently taken our commitment a step further by supporting organizations, programs and thought leaders in their efforts to protect the environment. By making this important investment, UPS hopes to inspire others and turn the tide to lasting change.

It's the right thing to do, and it's a commitment that's as much a part of UPS as our brown trucks.

Environmental responsibility:
at the heart of UPS.

community.ups.com

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Wednesday, January 20, 2010

Detailed Agenda

- 9:00 am –
5:00 pm
- Skill Building Workshops – Full-Day Sessions**
- Metrics – Life Cycle Assessment and Greenhouse Gas Metrics**
01. Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002) (*Washington Club, 15 Dupont Circle, NW, Washington, DC 20036*) Intersection: *Dupont Circle and P*, Closest Metro Station: *Dupont Circle*
- Conservation**
02. The New Conservation Strategy and the New Green Economy (*National Audubon Society 1150 Connecticut Avenue Northwest, Washington, DC, 20036*) Closest Metro Station: *Farragut North Station*
- Economics**
03. Alternatives to Neoclassical Economics for Business and National Security (*Potomac Institute for Policy Studies, Ballston Metro Center Office Tower, 901 N. Stuart Street, Suite 200, Arlington, VA 2203*) Intersection: *Stuart and 9th*, Closest Metro Station: *Ballston – MU Station*
- Infrastructure/Green Buildings**
04. Greening the Building Envelope – Research Driven Product and Market Development of Green Roof and Green Wall Technologies (*U.S. Green Building Council, 2101 L Street, NW, Suite 500, Washington, DC 20037 – 9:00 am-3:00 pm*) Intersection: *21st and L*, Closest Metro Station: *Farragut North Station*
- 9:00 am –
12:00 pm
(unless
otherwise
indicated)
- Skill Building Workshops – Morning-Only Sessions**
- Education - Higher**
07. Building Undergraduate and Graduate Programs in Ecological Economics (*Heinz Center, Conference Room, 900 17th Street, NW, Suite 700, Washington, D. C. 20006 – 10:00 am-12:00 pm*) Intersection: *17th and I*, Closest Metro Station: *Farragut North*
08. An Integrated Approach to Addressing Sustainability in Undergraduate Science, Technology, Engineering, and Mathematics (STEM) Learning Environments (*Herman Miller Headquarters, 600 14th Street, Suite 700, Washington, DC 20005*) Intersection: *14th and F*, Closest Metro Station: *Metro Center*
09. How Our Nation’s Colleges and Universities Can Generate Solutions for the New Green Economy (*Nixon Peabody LLP, Conference Room, 401 9th Street, NW, Washington, DC 20004*) Intersection: *9th and D*, Closest Metro Station: *Federal Triangle*
- Education – Climate**
10. Climate 101: Lessons from the Essential Principles of Climate Literacy (*American Association for the Advancement of Science (AAAS), 1200 New York Avenue, NW, 2nd Floor, Washington, DC 20005*) Intersection: *New York and 12th*, Closest Metro Station: *Metro Center*
- Sustainable Practices Technology**
11. Build a Solar Cooker (*The George Washington University, Marvin Center, Room 308, 800 21st Street, NW, Washington, DC 20052*) Intersection: *21st and I*, Closest Metro Station: *Foggy Bottom*
12. Greening Your Organization – The Unique Challenge of Greening Your Non-Profit (*Society for Conservation Biology, 1017 O Street, NW, Washington, DC 20001*) Intersection: *11th and O*, Closest Metro Station: *Mt. Vernon Square/7th Street Convention Center Station*
- Advocacy**
14. Lobbying for Trees (*Defenders of Wildlife, Conference Room, 1st Floor, 1130 17th Street, NW, Washington, DC 20036*) Intersection: *17th and L*, Closest Metro Station: *Farragut North*

Jobs

15. An Introduction to Green Jobs – For Those Interested in Obtaining One (*The George Washington University, Marvin Center, Room 310, 800 21st Street, NW, Washington, DC 20052*) Intersection: *21st and I*, Closest Metro Station: *Foggy Bottom*

Metrics – Life Cycle Assessment and Greenhouse Gas Metrics

16. (Morning-Only) Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002) (*Location TBD*)

Communications

17. Social Networking: Using the Internet to Promote Your Work! (*The George Washington University, Marvin Center, Room 302, 800 21st Street, NW, Washington, DC 20052*) Intersection: *21st and I*, Closest Metro Station: *Foggy Bottom*

Methods – GIS

18. Using GIS for Effective Green Energy (*University of the District of Columbia, Building 42, Room 110, 4200 Connecticut Avenue, NW, Washington, DC 20008*) Intersection: *Connecticut and Van Ness*, Closest Metro Station: *Van Ness – UDC Station*

Information Technology

19. Case Studies in Green IT (*Potomac Room, City Club at Columbia Square, Columbia Square Building, 555 Thirteenth Street NW, Washington, DC 20004 - 10:00 am-12:00 pm*) Closest Metro Station: *Metro Center Station*

1:00 pm –
5:00 pm
(unless
otherwise
indicated)

Skill Building Workshops – Afternoon-Only Sessions

Green Development

21. The Art of Creating Green, Functioning, Residential Communities: Biodiversity and Water (*Defenders of Wildlife, Conference Room, 1st Floor, 1130 17th Street, NW, Washington, DC 20036*) Intersection: *17th and L*, Closest Metro Station: *Farragut North*

Education K-12

22. Environmental Education and Action: Giving Students the Tools to Make a Difference in the World (*American Association for the Advancement of Science (AAAS), 2nd Floor, 1200 New York Avenue, NW, Washington, DC 20005*) Intersection: *New York and 12th*, Closest Metro Station: *Metro Center*

Education – Higher Business

23. What Does Green Mean? Sustainability Curricula in U.S. Business Schools (*Robert H. Smith School of Business, University of Maryland, Ronald Reagan Building, Suite C-3, 1200 Pennsylvania Ave - 2:00-4:30 pm*) Intersection: *13th and Pennsylvania*, Closest Metro Station: *Federal Triangle*

Education – Higher

24. Lessons Learned from Engaged Scholarship for Sustainability On Campus and Beyond (*Nixon Peabody LLP, Conference Room, 401 9th Street, NW, Washington, DC 20004*) Intersection: *9th and D*, Closest Metro Station: *Federal Triangle*
25. Practical Ecoliteracy: Educating Green Leaders for a Green Economy (*University of the District of Columbia, Building 42, Room A-06*)

Education - Professional

26. The Green Learning Curve: Employee Environmental Education (*The George Washington University, Marvin Center Room 308, 800 21st Street, NW, Washington, DC 20052*) Closest Metro Station: *Foggy Bottom Station*

Education – Higher and Community

27. Sustainable Societies: Education for Economic, Environmental and Cultural Transformation (*AED Board Room, Eighth Floor, Academy for Educational Development, 1825 Connecticut Ave, NW, Washington, DC 20009*) Intersection: *Enter on Connecticut Ave.*, Closest Metro Station: *Dupont Circle*

Sustainable Practices Technology

28. Rainwater Harvesting & Use (*The George Washington University, Marvin Center, Room 310, 800 21st Street, NW, Washington, DC 20052*) Intersection: 21st and I, Closest Metro Station: Foggy Bottom

Decision Making

29. How Collaborative Processes Can be Used to Reach Appropriate and Timely Environmental Decisions (*William Penn House, 515 East Capitol Street, SE, Washington, DC 20003*) Intersection: 6th and E. Capitol, Closest Metro Station: Eastern Market

Executive Leadership

30. Sustainable Leadership Practices™...Green and Beyond (*ID Required - Ariel Rios North Building, Room 5530, 1200 Pennsylvania Avenue, NW, 20460*) Intersection: 13th and Pennsylvania, Closest Metro Station: Federal Triangle

Metrics Ecosystem Services

31. Practical Assessment and Valuation of Ecosystem Services with ARIES and MIMES (*University of the District of Columbia, Building 41 Room 322 GIS Lab, 4200 Connecticut Avenue Northwest Washington, DC 20008*) Intersection: Connecticut and Van Ness, Closest Metro Station: Van Ness – UDC Station

Green Buildings

32. Detroit, Dallas & Despotism: A 3D View of Sustainability (*U.S. Green Building Council, 2101 L Street, NW, Suite 500, Washington, DC 20037 - 3:30-5:00 pm*) Intersection: 21st and L Street, Closest Metro Station: Farragut North
33. Legal Issues Relating to Green Buildings (*The George Washington University, 2000 H Street, NW, Burns Moot Court Room, Washington, DC 20052 - 1:30-3:00 pm*) Intersection: 20st and H, Closest Metro Station: Foggy Bottom

Investment

34. How to Tailor Investment in a Green Economy – Identifying and Evaluating Opportunities in Green Sectors (*United Nations Environment Programme/Regional Office for North America, 900 17th Street, NW, Suite 506, Washington, DC 20006*) Intersection: 17th and I Street, Closest Metro Station: Farragut West

Sustainable Practices

35. Green Business Certification – Certifying Office-Based and Retail Businesses (*The George Washington University, Marvin Center, Room 307, 800 21st Street, NW, Washington, DC 20052*) Intersection: 21st and I, Closest Metro Station: Foggy Bottom

Advocacy

36. From Political Action to Grassroots Action (*The George Washington University, Marvin Center, Room 309, 800 21st Street, NW, Washington, DC 20052*) Intersection: 21st and I, Closest Metro Station: Foggy Bottom

Communications

37. The New Green Economy influenceXchange: Social Media Best Practices and Workshop (*H. John Heinz III Center, Room, 900 17th Street, NW, Suite 700, Washington, D. C. 20006 – 1:00 pm-5:00 pm*) Intersection: 17th and I, Closest Metro Station: Farragut North

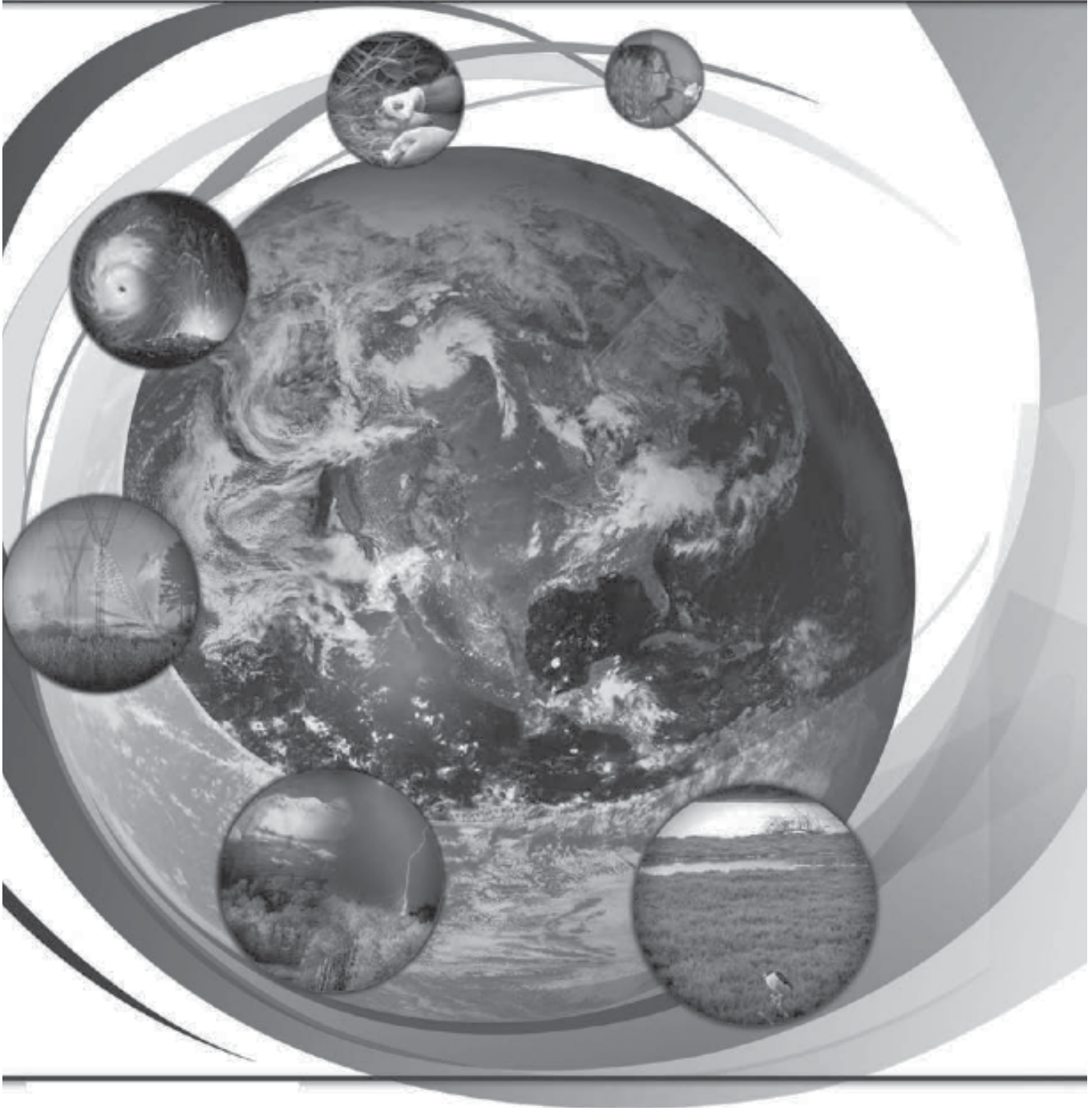
Environment and Health

39. Undergraduate Public Health Studies: Integrative Strategies, Curricular Frameworks, and Ongoing Networks (*Grand Hyatt, 1000 H Street, NW, Room TBD, Washington, DC 20001*) Intersection: 11th and H, Closest Metro Station: Metro Center

Metrics – Life Cycle Assessment and Greenhouse Gas Metrics

41. (Afternoon-Only) Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002) (*Washington Club, 15 Dupont Circle, NW, Washington, DC 20036*) Intersection: Dupont Circle and P, Closest Metro Station: Dupont Circle

PROVIDING SCIENCE TO GROW A GREEN ECONOMY



WORKSHOPS

Wednesday, January 20, 2010: Full-Day, Morning-Only, and Afternoon-Only

Full-Day Sessions: 9:00 am to 5:00 pm

01. **Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002)**

(Washington Club, 15 Dupont Circle, NW, Washington, DC 20036)

This workshop is an open SCS-002 Committee meeting and will explain the foundations of an LCA-based environmental performance assessment and provide an overview of impact category indicators. We will explore the draft standard's metrics and algorithms for calculating impacts related to energy resources, strategic metals, air, water, climate, habitats and species.

The SCS-002 draft standard, currently being developed under the ANSI process, uses the best available science to calculate accurate, technology-neutral, and verifiable environmental impacts and normalize them per unit of product or service, allowing for comparisons and quantifiable improvements. The methodology complies with ISO 14044 life cycle assessment framework for environmental performance declarations.

Organizers:

Kimi Ceridon, Founder and Lead Sustainability Engineer, Kalepa Tech LLC
Stanley Rhodes, President and CEO, Scientific Certification Systems

Ashley Foster, Sustainability Manager, Scientific Certification Systems

Bill Karsell, Chairperson, SCS-002 Standards Committee

Facilitators:

Bill Heenan, Steel Recycling Institute (Air Quality and Emissions)

Steve Apfelbaum, Applied Ecological Services, Inc. (Landscape Disruption)

Steve Bradfield, MBDC (Non-Renewable Feedstock Resource Depletion)

Amy Costello, Armstrong World Industries (Ocean Acidification)

Katherine Gabor, Scientific Certification Systems (Human Toxicity)

Bill Karsell (Approach to Climate Change)

Kimi Ceridon (Applications of LCA Standard in the Marketplace)

Discussants:

Kirk LaGory, Argonne National Laboratories (Landscape Disruption)

Mary McLearn, Electric Power Research Institute (Landscape Disruption)

Steve Apfelbaum (Landscape Disruption)

Eladio Knipping, EPRI (Air Quality Emissions)

Fred Lipschultz, NASA & JSOST Interagency Working Group on Ocean Acidification (Ocean Acidification)

James A. Luppens, USGS (Non-Renewable Feedstock Resource Depletion)

Katherine Gabor (Human Toxicity)

Michael MacCracken, The Climate Institute (Climate)

Karl Hausker, ICF International (Climate)

Stanley Rhodes (LCA)

Colin High, RSG (LCA)

02. **The New Conservation Strategy and the New Green Economy** (*National Audubon Society, Conference Room, 1150*

Connecticut Ave NW, Washington, DC 20036)

This workshop reviews the global changes driving the new economy emergence, how this economy works and is changing society, and how this change is playing in key sectors: corporate, urban and rural. It explores how global change and the new economy are shifting conservation from management of resources to management of complex interconnected natural-and-human systems including their health, sustained productivity, and regeneration. It explores new conservation management of the massive knowledge to be generated, diffused and applied, to achieve the urgently needed shift from accelerating resource

consumption and waste to accelerating resource performance and regeneration. It identifies the necessity of all-sector engagement and the imperative of converged digital media, connection and coordination in this new conservation. It includes brainstorming solutions to implementing the new conservation.

Organizers:

John L. Motloch, Director, Land Design Institute; Professor of Landscape Architecture, Ball State University

J. David Armistead, Founding Partner, Social Web Strategies, LLC

Moderator/Facilitator:

Joanne Dowdell, Senior Vice President, Director of Corporate Responsibility, Sentinel Financial Services Company

Scott Truex, Associate Professor of Urban Planning; Director, Community Based Project (CBP) Program, Ball State University

John Vann, Associate Professor of Marketing and Green Coordinator, Ball State University

03. Alternatives to Neoclassical Economics for Business and National Security

(Potomac Institute for Policy Studies, 901 N. Stuart St. Suite 200, Arlington, VA 22203)

This workshop will provide an opportunity to consider alternative ideas to current thinking about sustainable economic development in the green economy. The discussions will provide recommendations for the sustainable economy of the future.

Organizer:

James Tate, Jr., Senior Fellow, Potomac Institute for Policy Studies; Director, Center for Environmental Economics and Ethics

Moderator:

James Giordano, Chair of Academic Programs, Potomac Institute for Policy Studies

Discussants:

R. Warren Flint, Principal, Five E's Unlimited

Brian Czech, President, Center for the Advancement of the Steady State Economy (CASSE)

Joan Michelson, Joan Michelson & Associates

04. Greening the Building Envelope – Research Driven Product and Market Development of Green Roof and Green Wall Technologies

(U.S. Green Building Council, 2101 L Street, NW, Suite 500, Washington, DC 20037)

An emerging strategy for mitigating the effects of the urban built environment is the establishment of a living vegetative cover on or around a building that replaces the ecological footprint lost when the building was constructed. Our current institutional and governance structures that determine how billions of dollars in infrastructure spending are allocated are not well equipped to deal with multidisciplinary, multi-benefit-providing aspects of green infrastructure. Yet it is at the broader scale of implementation, measured in square miles, rather than square feet, that green roofs and green walls have the potential to really deliver value-added benefits. We will take stock of what we know, build on current efforts, and develop more refined methodology for quantifying community-scale benefits of green roof and green wall infrastructure.

Organizer/Moderator:

Bill Retzlaff, Chair, Department of Biological Sciences, Southern Illinois University, Edwardsville

Additional Discussants:

Chris Pyke, Research Director, U.S. Green Building Council

Kelly Luckett, President, Green Roof Blocks

Mark Graham, Associate Executive Director, National Roofing Contractors Association

Reuben Freed, Director of Research and Development, greenscreen©

Mark Woolbright, President, Green Wall Ventures LLC

Mike Furbish, President, Furbish Company LLC

Mark Simmons, Ecologist, University of Texas at Austin

Morning-Only Sessions: 9:00 am to 12:00 pm

07. **Building Undergraduate and Graduate Programs in Ecological Economics**

(H. John Heinz III Center, 900 17th Street, NW, Suite 700, Washington, D. C. 20006)

The field of ecological economics provides a foundational model for the transition to a new green economy – an economy characterized by sustainable scale, fair distribution of wealth, and efficient allocation of resources. It is critical that the next generation of students learns the concepts of ecological economics, but programs and courses are rare. The purpose of this workshop is to explain how to build undergraduate and graduate programs in ecological economics. Participants will explore two basic models for building such programs: (1) constructing a full-scale ecological economics program with several degree options, and (2) developing a collaborative program within a department of natural or social science. Workshop instructors will describe program elements, course content, successes in program development, and pitfalls to avoid.

Organizer/Moderator:

Rob Dietz, Executive Director, Center for the Advancement of the Steady State Economy (CASSE)

Additional Discussants:

Brian Czech, Visiting Professor of Ecological Economics, Virginia Tech University

Jon Erickson, Associate Professor and Managing Director, Gund Institute for Ecological Economics

Kevin Horan, Course Developer and Instructor of Ecological Economics, University of Oregon

Chris Stratton, Course Developer and Instructor of Ecological Economics, University of Oregon

08. **An Integrated Approach to Addressing Sustainability in Undergraduate Science, Technology, Engineering, and Mathematics (STEM) Learning Environments**

(Herman Miller Headquarters, 600 14th Street, Suite 700, Washington, DC 20005)

For many colleges and universities, the opportunity to shape and reshape spaces for undergraduate STEM learning is time to engage the entire community in exploring ways to incorporate issues relating to sustainability into the curriculum (what

is to be learned) and into the process of imagining, planning and constructing/reconstructing a ‘green’ 21st century STEM learning environment (how/where learning is to happen). Participants will explore examples from campuses that have developed institution-wide planning teams (faculty, administrators, facilities directors, students, etc.) that give attention to the ‘real-world’ problems of shaping sustainable and green environments for learning, living and working. Resources from both Project Kaleidoscope (PKAL) and the Association for the Advancement of Sustainability in Higher Education (AASHE) will be provided.

Organizer/Moderator:

Jeanne L. Narum, Founding Director, Project Kaleidoscope

Additional Discussants:

Debra G. Rowe, President, U.S. Partnership for Education for Sustainable Development, Behavioral and Social Sciences, Oakland Community College

Matthew Richey, Associate Dean of Natural Sciences and Mathematics, Professor of Mathematics, St. Olaf College

09. **How Our Nation’s Colleges and Universities Can Generate Solutions for the New Green Economy** *(Nixon Peabody LLP, Conference Room, 401 9th Street, NW, Washington, DC 20004)*

In recent years, colleges around the country have been in the forefront of the climate movement. From Middlebury to Bard to the hundreds of colleges and universities that have hosted events sponsored by the National Teach-In on Global Warming Solutions, 350.org, and Energy Action, campuses nationwide have shown how higher education can change the national conversation about global warming. As the climate movement moves to its next stage of building the new green economy, campus leaders - including students, faculty and staff - are pursuing innovative, solutions-based education and research and demanding action from Congress. Participants will discuss how our nation’s colleges and universities, building on successes to date, can take the lead in creating solutions for the new green economy.

Organizer/Moderator:

Jonathan Isham, Associate Professor of Economics and Environmental Studies, Middlebury College

Additional Discussants:

Eban Goodstein, Director, Bard College Center for Environmental Policy

Frank Sesno, Director, School of Media and Public Affairs, The George Washington University

Paul Rowland, Executive Director, Association for the Advancement of Sustainability in Higher Education

10. **Climate 101: Lessons from the Essential Principles of Climate Literacy**

(American Association for the Advancement of Science (AAAS), 1200 New York Avenue, NW, 2nd Floor, Abelson & Haskins rooms, Washington, DC 20005)

Participants will learn the background of how the Essential Principles of Climate Literacy have been developed, an overview of them including related misconceptions, and insights into how they can be applied by individuals and in educational and institutional settings. After the workshop, participants will understand the key elements that have been identified as integral to climate literacy and how they can be applied for informed decision-making. Discussion will focus on the role of climate literacy in fostering the green economy and developing effective technological and social solutions.

Organizer/Moderator:

Mark McCaffrey, Associate Scientist, CIRES, University of Colorado, Boulder

Additional Discussants:

Tamara Shapiro Ledley, Senior Scientist, TERC, Climate Literacy Network

Frank Niepold, Climate Education Coordinator, NOAA Climate Program Office

11. **Build a Solar Cooker**

(The George Washington University, Marvin Center, Room 308, 800 21st Street, NW, Washington, DC 20005)

This half-day workshop combines science and “green” in a fun, hands-on format. Come learn how to build a solar cooker; several will be built in class and can be taken home. The workshop will begin with a discussion of solar cookers. It will explain why they were developed and where they are used. It will explain how solar cookers work. Then, it will provide many examples of different types of solar cookers so that the participants can see the similarities across them and why some work more effectively than others. Materials for making solar cookers will be provided, and the instructors will guide the participants in making their own. Instructions for using solar cookers and sample recipes will be provided to workshop participants.

Organizers:

Amy Townsend, President, Sustainable Development International Corporation; adjunct faculty, The George Washington University and James Madison University
Mark Starik, Chair, Strategic Management & Public Policy, The George Washington University

Moderators:

Amy Townsend

Sophie Zavaglia, student, The George Washington University

Additional Discussants:

Louise Meyer, Co-Founder, Solar Household Energy, Inc.

Dar Curtis, Co-Founder, Solar Household Energy, Inc.

12. **Greening Your Organization – The Unique Challenge of Greening Your Non-Profit**

(Society for Conservation Biology, 1017 O Street, NW, Washington, DC 20001)

Surviving and thriving in the New Green Economy means organizational practices of the past will no longer be sufficient or advantageous. In order to compete and be effective, organizations will need to develop new sustainable strategies that go beyond an organization’s core operations and extend to levels that are above and below the organization such as members, vendors, and peer-organizations. This half-day workshop will present a new vision for greening an organization that takes into account the challenges that exist (with an emphasis on the particular challenges that non-profits face) while highlighting the opportunities for having a real impact on the practices and behaviors of individuals and organizations beyond your own.

Organizers:

Jennifer Thornhill, Social Scientist, National Science Foundation

Alan Thornhill, Executive Director, Society for Conservation Biology

Additional Discussants:

Adam Silverman, Deputy Division Director, Division of Administrative Services, National Science Foundation

Colin Bennett, Office of Sustainability, George Mason University

14. Lobbying for Trees

(Defenders of Wildlife, Conference Room, 1st Floor, 1130 17th Street, NW, Washington, DC 20036)

In the new green economy, federal policymakers are critical to securing real green jobs, Smart Growth that includes green infrastructure, climate security, and communication across sectors including energy, transportation, and public health. Trees are essential to the health and livability of our nation's cities and towns. Clean air, green streets, and healthy neighborhoods are tied to the prosperity of the American economy. But lasting progress won't come without changes in domestic policy. Now is the time to harness the momentum of a new Congress and a new administration.

Join a discussion about how green infrastructure fits into recent hearings, committee reports, and legislation on topics including climate change, energy independence, affordable housing, transportation reauthorization, community reinvestment, wildfires, preservation of natural resources, and investment in infrastructure.

Organizer/Moderator:

Jared Liu, Director of Programs, Alliance for Community Trees

Additional Discussants:

Alice Ewen Walker, Executive Director, Alliance for Community Trees

Corey Connors, Director of Legislative Affairs, American Nursery and Landscape Association

Jake Reilly, Program Associate, Forest Policy Center, American Forests

Jennifer Hinrichs, Convener, Sustainable Urban Forest Coalition

Glenda Booth, National Audubon Society

15. An Introduction to Green Jobs – For Those Interested in Obtaining One *(The George Washington University, Marvin Center, Room 310, 800 21st Street, NW, Washington, DC 20052)*

The term "Green Jobs" is everywhere these days; in the media, stimulus debates and budget discussions on the federal, state, and local level. There is so much expressed interest in pursuing a green job, but there is a lot of confusion about what this term really means. Who is qualified for a green job? What kind of work would you do? How much would it pay? Where would you find them?

This interactive workshop helps scientists, business leaders, and policymakers get answers to their questions about green jobs, from real world perspective from the people who have them and create them. Presenter is Anca Novacovici, founder

of Eco-Coach and a green jobs expert, will answer your questions about green jobs with a panel of experts. Anca has literally written the book - 'DC Metro Area Green Career and Jobs Guide' and is developing green job training programs in DC.

Organizer:

Cindy Olson, Vice President, Eco-Coach, Inc.

Additional Discussants:

Dan Triman, Sustainability Consultant

Mark Starik, Department Chair and Professor of DC Strategic Management & Public Policy; Director, Institute for Corporate Responsibility, Environmental Sustainability Program, The George Washington University School of Business

Stephen C. Nodvin, Associate Professor of Natural Sciences, Wentworth Institute of Technology

Elizabeth Lindsey, Policy Advisor, Office of the Director, District of Columbia Department of Employment Services

Arielle Conti, Managing Editor for the *Encyclopedia of Earth*, National Council for Science and the Environment

16. (Morning-Only) Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002)

(Washington Club, 15 Dupont Circle, NW, Washington DC 20036)

**This morning portion of workshop 01 will include an introduction and five breakout sessions focusing on the following topic areas:*

- Air Quality and Emissions Indicators
- Landscape Disruption
- Non-Renewable Feedstock Resource Depletion
- Oceanic Acidification
- Human Toxicity

This workshop is an open SCS-002 Committee meeting and will explain the foundations of an LCA-based environmental performance assessment and provide an overview of impact category indicators. We will explore the draft standard's metrics and algorithms for calculating impacts related to energy resources, strategic metals, air, water, climate, habitats and species.

The SCS-002 draft standard, currently being developed under the ANSI process, uses the best available science to calculate accurate, technology-neutral, and verifiable environmental impacts and normalize them per unit of product or service, allowing for comparisons and quantifiable

improvements. The methodology complies with ISO 14044 life cycle assessment framework for environmental performance declarations.

Organizers:

Kimi Ceridon, Founder and Lead Sustainability Engineer, Kalepa Tech LLC
Stanley Rhodes, President and CEO, Scientific Certification Systems

Ashley Foster, Sustainability Manager, Scientific Certification Systems

Bill Karsell, Chairperson, SCS-002 Standards Committee

Facilitators:

Bill Heenan, Steel Recycling Institute (Air Quality and Emissions)

Steve Apfelbaum, Applied Ecological Services, Inc. (Landscape Disruption)

Steve Bradfield, MBDC (Non-Renewable Feedstock Resource Depletion)

Amy Costello, Armstrong World Industries (Ocean Acidification)

Katherine Gabor, Scientific Certification Systems (Human Toxicity)

Bill Karsell (Approach to Climate Change)

Kimi Ceridon (Applications of LCA Standard in the Marketplace)

Discussants:

Kirk LaGory, Argonne National Laboratories (Landscape Disruption)

Mary McLearn, Electric Power Research Institute (Landscape Disruption)

Steve Apfelbaum, Applied Ecological Services, Inc. (Landscape Disruption)

Eladio Knipping, EPRI (Air Quality Emissions)

Fred Lipschultz, NASA & JSOST Interagency Working Group on Ocean Acidification (Ocean Acidification)

James A. Luppens, USGS (Non-Renewable Feedstock Resource Depletion)

Katherine Gabor (Human Toxicity)

Mike MacCracken, The Climate Institute (Climate)

Karl Hausker, ICF International (Climate)

Stanley Rhodes (LCA)

Colin High, RSG (LCA)

17. Social Networking: Using the Internet to Promote Your Work!

(The George Washington University, Marvin Center, Room 302, 800 21st Street, NW, Washington, DC 20052)

Knowing how to use the internet to promote your cause is one of the most powerful tools for

recruiting, getting the word out, having a successful event, creating visibility and legitimizing your group. This workshop will demonstrate 1Sky's successful method, in bringing old school organizing and cutting edge technology together - to become one of most recognized climate campaigns. Participants will learn how to set themselves apart, by using the most effective social networking tools available (Facebook, managing email lists, getting on listservs, blogs, etc.) - all the while keeping the human connection and appealing to your audience.

Organizer:

Sarah Schwarz, Organizer, 1Sky

Additional Discussants:

Garth Moore, Internet Director, 1Sky

Michael Silberman, Co-Founder and Partner, Echo Ditto

18. Using GIS for Effective Green Energy

(University of the District of Columbia, Building 42, Room 110, 4200 Connecticut Avenue, NW, Washington, DC 20008)

This hands-on workshop will demonstrate the ability of a Geographic Information System (GIS) to provide database and analysis components needed to move towards a "green" future. Introductory exercises will enable the user to interact with the software, explore the data and perform minimal analytical tasks. Development of "green models" to achieve sustainable green economies will be based on the needs of the population and the availability of the resource. The utility of a resource and its sustainability is a function of geography, time, technology and science. To produce viable "green" models to foster sustainable solutions for contemporary and future energy needs, data must be stored and analyzed in a competent and capable information system. GIS provides the perfect environment for this task.

Organizer/Moderator:

Helenmary Hotz, GIS Lab Manager, University of Massachusetts, Boston,

Additional Discussants:

Anamarija Frankic, Assistant Professor, University of Massachusetts, Boston, Environmental, Earth and Ocean Sciences Department

Ellen Douglas, Assistant Professor, University of Massachusetts, Boston, Environmental, Earth and Ocean Sciences Department

Lisa Greber, Doctoral student, University of Massachusetts, Boston, Environmental, Earth and Ocean Sciences Department

19. **Case Studies in Green IT** (*Potomac Room, City Club at Columbia Square, Columbia Square Building, 555 Thirteenth Street NW, Washington, DC 20004, – 10:00am-12:00 pm*)

Experts from education, industry and government will share how the ‘Green’ Economy and ‘Computer’ Economy not only can be compatible, they can support each other. The panelists will present real-world cases of energy management strategies and tactics, leveraging the opportunities of each to create opportunities for increased cost savings, improvements in air quality and reduced carbon footprint.

Organizer:

Hank Dearden III, CEO, Virsant, Inc.

Additional Discussants:

Suresh Balakrishnan, Assistant Vice Chancellor, University System of Maryland

Jim Loving, Executive Consultant for Energy, Environment & Sustainability, IBM

**Session sponsored by IBM*

Afternoon Sessions from 1:00 pm to 5:00 pm

21. **The Art of Creating Green, Functioning, Residential Communities: Biodiversity and Water** (*Defenders of Wildlife, Conference Room, 1st Floor, 1130 17th Street, NW, Washington, DC 20036*)

Many residential developments and rural properties are situated near or in habitats that sustain native plant and animal communities. This workshop is devoted to the design and management of residential communities for biodiversity and water quality within the urban and rural matrix. The places we live are dominated by buildings and/or agriculture, but they still offer opportunities to improve biodiversity and to protect water quality. Information presented will address the design, construction, and post-construction phases when creating a subdivision. While the emphasis is on new development, both within the urban core and rural fringe, the information presented here can be used to ‘retrofit’ existing urban communities as well as to conserve or restore rural properties that are not designated for subdivision.

Organizer:

Mark Hostetler, Associate Professor, Department of Wildlife Ecology and Conservation, University of Florida

22. **Environmental Education and Action: Giving Students the Tools to Make a Difference in the World** (*American Association for the Advancement of Science (AAAS), 2nd Floor, 1200 New York Avenue, NW, Washington, DC 20005*)

Greenproofing will present their STEM-based Service-Learning Program that challenges students and benefits communities, utilizing a hands on experiment derived from the GLOBE Environmental Education curriculum. GP will highlight the educational and social implications for their project in historically blighted communities, burdened with environmental issues.

Young Voices on Climate Change will present a video documentary sharing the stories of young people who have been empowered to make changes to make their school and their world more environmentally sustainable.

YVCC will demonstrate the project’s potential to galvanize the American public—adults and kids alike—and create a paradigm shift in the way that society views, and acts to abate, global warming.

Organizers:

Anasa Scott, Greenproofing, City College of New York

Lynne Cherry, Director and Author, Young Voices on Climate Change

Additional Discussants:

Federica Raia, Associate Professor of Earth and Atmospheric Science and Secondary Education, City College of New York

Frank Niepold, Education and Outreach Specialist, National Oceanic Atmospheric Association

Gary Braasch, Environmental Photojournalist

Kevin Foster, Assistant Professor of Economics and Deputy Dean of Social Science, City College of New York

Bertha Vasquez, Teacher, George Washington Carver Middle School, Miami

23. **What Does Green Mean? Sustainability Curricula in U.S. Business Schools** (*Robert H. Smith School of Business, University of Maryland, Ronald Reagan Building, Smith Classroom C-3, 1200 Pennsylvania Avenue, NW, Washington, DC 20004*)

Current business school students will play critical leadership roles in "The New Green Economy" (NGE). Many, if not most b-schools now have sustainability-focused courses and programs, but these offerings do not typically include the science and policy underlying relevant threats and

innovations. Traditional b-school rankings suggest little emphasis on sustainability. Rankings more focused on society and the environment do not appear to recognize the essentiality of integrating other disciplines in b-school sustainability curricula.

In this workshop, participants will examine mainstream approaches to teaching and ranking sustainability in business schools and alternative approaches and models, including Will Focht's "supradisciplinarity" framework and other evaluative frameworks. Participants will also have the opportunity to apply these concepts, assessing their own programs and/or existing programs at other institutions.

Organizer/Moderator:

Richard C. Smardon, Professor, Environmental Studies, State University of New York, College of Environmental Science and Forestry

Additional Discussants:

Lisa B. Cleckner, Assistant Director of Operations for Quality Assurance, Syracuse Center of Excellence in Environmental & Energy Systems; Research and Project Manager, U.S. Environmental Finance Center at Syracuse University

Sandra B. Connors, William H. Thompson School of Business, Brescia University (invited)

24. Lessons Learned from Engaged Scholarship for Sustainability On Campus and Beyond (*Nixon Peabody LLP, Conference Room, 401 9th Street, NW, Washington, DC 20004*)

This half-day workshop will use the example of UPENN's on-campus and UNH's off-campus sustainability leadership to engage participants in developing lessons learned and best practices for engaged scholarship for sustainability – scholarship that results in concrete solutions to our sustainability challenges. UPENN will share its knowledge and experience in engaging on-campus stakeholders in performing energy audits of campus buildings, producing a climate action plan, and implementing energy conservation and carbon reduction initiatives campus wide. UNH will share its lessons learned in engaging faculty, staff and students in working with external partners to develop mutually beneficial, decision-relevant knowledge to advance sustainability. Participants will share their own lessons learned, challenges and opportunities in order to generate overall best practices and what's needed to advance engaged

scholarship for sustainability, both on and beyond campus, now and into the future.

Organizers:

Sara M. Cleaves, Associate Director, UNH University Office of Sustainability

Daniel Garofalo, AIA Environ Sustainability Coordinator/Senior Facilities Planner, University of Pennsylvania

Sarah-Jane Littleford, Carbon Reduction and ACUPCC Liaison Associate, Facilities and Real Estate Services, University of Pennsylvania

Additional Discussants:

William W. Braham, Associate Professor, Interim Chair of the Department of Architecture, University of Pennsylvania

Tom Kelly, Chief Sustainability Officer and Director of the University Office of Sustainability, University of New Hampshire

Cameron Wake, Research Associate Professor, Institute for the Study of the Earth, Oceans and Space, University of New Hampshire; Director, Carbon Solution New England

Ross Gittell, James R. Carter Professor and Professor of Management, Whittemore School of Business & Economics, University of New Hampshire

25. Practical Ecoliteracy: Educating Green Leaders for a Green Economy

(*University of the District of Columbia, Building 42, Room A-06, 4200 Connecticut Avenue, NW, Washington, DC 20008*)

Green economies will be as varied as the ecosystems they arise from. As such they will need leaders at all levels who possess fundamental ecological knowledge, as well as technical and "soft" skills – green economies will ask all citizens to become green leaders within the fields of their choice. This is a call for a practical ecoliteracy: to prepare students with both the knowledge of the current best green practices in their fields, as well as the ecological reasons behind those practices – the *why* as well as the *what*.

Organizer:

Anamarija Frankic, Assistant Professor, University of Massachusetts, Boston, Environmental, Earth and Ocean Sciences Department

Ellen Douglas, Assistant Professor, UMass Boston, Environmental, Earth and Ocean Sciences Department

Helenmary Hotz, GIS Analyst, UMass Boston, Environmental, Earth and Ocean Sciences Department

Lisa Greber, Doctoral student, UMass Boston, Environmental, Earth and Ocean Sciences Department

26. **The Green Learning Curve: Employee Environmental Education** (*The George Washington University, Marvin Center, Room 308, 800 21st Street, NW, Washington, DC 20052*)

Through employee engagement, companies can spark innovative changes in everyday business processes that save money and reduce environmental and social impacts. This workshop is designed to share best practices for design and implementation of employee sustainability education and engagement programs as well as to develop policy recommendations for promotion of such programs.

During this workshop, the National Environmental Education Foundation (NEEF) will share findings from “The Engaged Organization” report. “The Engaged Organization” provides survey results and case studies documenting that environmental education is already standard practice at many companies, and that environmentally educated employees are improving a business’ bottom line and helping it implement its sustainability goals. Panelists will share success stories and best practices, in an interactive dialogue with workshop participants.

Organizers:

Krista Gullo, Consultant, the National Environmental Education Foundation

Leah Haygood, Consultant, the National Environmental Education Foundation

Erin Milstead, Intern, the National Environmental Education Foundation

Deborah Sliter, Vice President of Programs, the National Environmental Education Foundation

Moderator:

Ken Strassner, retired Vice President, Global Environment, Safety, Regulatory and Scientific Affairs, Kimberly-Clark Corporation

Additional Discussants:

Michelle Moore, Federal Environmental Executive, The White House Council for Environmental Quality

Thomas Higgins, Senior Relationship Manager, HSBC

Margaret Lindeman, Sustainability Strategist in Lockheed Martin’s Strategy, Advocacy & Policy group

Ed Murtagh, P.E. Sustainable Operations Manager, Office of Operations, USDA

27. **Sustainable Societies: Education for Economic, Environmental and Cultural Transformation**

(*Academy for Educational Development, 1825 Connecticut Avenue, NW, Board Room, Eight Floor, Washington, DC 20009*)

A new, green, economy is part of a larger paradigm shift toward becoming sustainable societies where job changes will be diverse and the opportunities profound. Preparation for such a new economy requires a different type of education.

The workshop provides the opportunity to use a new learning process that increases understanding of global challenges and the opportunities they present while building personal skills for developing solutions.

Organizer/Moderator:

William R. Godfrey, President, Environic Foundation International

Additional Discussants:

Robert D. Kuzelka, Former Director, Environmental Studies Program, University of Nebraska-Lincoln

Ed Barry, Director, Sustainable World Initiative; Sustainable Living Advisor, Population Institute

Kathleen J. Godfrey, Youth Coordinator, Environic Foundation International

28. **Rainwater Harvesting & Use**

(*The George Washington University, Marvin Center, Room 310, 800 21st Street, NW, Washington, DC 20052*)

Water is Earth’s most precious resource; without it, life cannot exist. The world’s supply of freshwater is limited, and freshwater stores are quickly being depleted and/or contaminated. By using some simple techniques, organizations and individuals can safeguard the world’s freshwater supplies and begin to rebuild depleted groundwater. During this engaging, hands-on workshop, the instructors will use the topic of harvesting and using rainwater to teach some environmental science, including basic information about the hydrologic cycle, the effects of runoff on waterways, groundwater and aquifer depletion and contamination, and water treatment systems. Furthermore, we will discuss how much rain falls on a rooftop, the amount of water that we

consume indoors and outdoors, and how we can conserve water by harvesting and using rainwater.

Organizer/Discussant:

Amy Townsend, President, Sustainable Development International Corporation; adjunct faculty, The George Washington University and James Madison University

Co-Organizer:

Mark Starik, Chair, Strategic Management & Public Policy, George Washington University

Moderators:

Amy Townsend

Sophie Zavaglia, student, The George Washington University

29. How Collaborative Processes Can be Used to Reach Appropriate and Timely Environmental Decisions

(William Penn House, 515 East Capitol Street, SE, Washington, DC 20003)

This interactive workshop will focus on the kinds of collaborative processes that have been used successfully around the country to assist communities and organizations in developing a shared strategy for responding to environmental issues. Actual case studies will be reviewed and discussed, and some practical strategies will be demonstrated. Participants will receive some collaborative tools to take with them. The workshop will also focus on how to get people to “come to the table” to participate in collaborative processes and how to determine whom to invite to such a process.

The following topics will be included: Previewing the Situation; Assessment; Convening the process; Conducting the process and Ongoing Evaluation.

Organizer/Moderator:

Ramona Buck, Public Policy Director, Maryland Mediation and Conflict Resolution Office (MACRO), the state dispute office under the Maryland Judiciary

Additional Discussants:

Tanya Denckla Cobb, Associate Director, Institute for Environmental Negotiation, University of Virginia

Robert Fisher, Public Policy Facilitator, Fisher Collaborative Services, LLC

30. Sustainable Leadership Practices™...Green and Beyond *(Ariel Rios North Building, Room 5530, 1200 Pennsylvania Avenue, NW, Washington, DC, 20460 – Federal Triangle Station)*

Leaders in all sectors will need new skills and competencies to facilitate and usher in the new green economy and a sustainable future. Our focus has been public leaders but these Sustainable Leadership Practices are relevant to all three sectors.

Our challenge is to look at the management and leadership practices that make it possible to successfully sustain our planet and society. We must become conscious of the resources (natural, human and economic) that are affected by the choices we make as leaders. Experience the success of the multi year clean-up of Boston Harbor through the use of sustainable leadership practices.

Organizers/Moderators:

Georgianna Bishop, President, Public Sector Consortium

Dennis O'Connor, Senior Policy Advisor, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency

31. Practical Assessment and Valuation of Ecosystem Services with ARIES and MIMES

(University of the District of Columbia, Building 41, Room 322, 4200 Connecticut Avenue Northwest Washington, DC 20008)

Traditional views of ecosystem services often exclude a clear conceptualization of how humans benefit from ecosystem services. In order to computationally quantify ecosystem services, the provision, use, and the flow of benefits from ecosystems to people must be spatially mapped. This workshop will describe two tools – the ARIES (Artificial Intelligence for Ecosystem Services) project and MIMES (Multi-scale Integrated Models of Ecosystem Services) model, which map supply, demand, and flow of ecosystem services, and provide scalable, dynamic, non-linear, spatially explicit simulation models of natural and human systems, respectively. This workshop is a hands-on session where participants will have a first chance of performing ecosystem service assessments using both the preview release of ARIES and the beta version of MIMES.

Organizer:

Ferdinando Villa, Gund Institute for Ecological Economics, University of Vermont

Moderators:

Ken Bagstad, Gund Institute for Ecological Economics, University of Vermont

Roelof Boumans, Gund Institute for Ecological Economics, University of Vermont

Additional Discussants:

David Batker, Executive Director, Earth Economics, Tacoma, WA

Les Kaufman, Department of Biology, Boston University

32. **Detroit, Dallas & Despotism: A 3D View of Sustainability**

CANCELLED

33. **Legal Issues Relating to Green Buildings**

(The George Washington University, Burns Moot Court Room, 2000 H Street, NW, Washington, DC 20052 – 1:30-3:00 pm)

In a world in which green buildings are becoming more and more common, and in many circumstances even required by governmental authorities, there are a myriad of agreements with which building owners, their agents and tenants will be executing to obtain and maintain the coveted “green status”. Since many of these documents will be merely modifications to existing contracts, it behooves all professionals working in the sustainable building arena to be cognizant of what should be newly addressed in those agreements. Similarly, since in some cases a certification level is desired by the property owner or tenant, those responsible for obtaining that certification may be subject to liabilities not envisioned prior to the green building world. This session discusses the many legal issues relating to green buildings.

Organizer:

Richard J. Sobelsohn, Associate, LEED Accredited Professional, Moses & Singer LLP

34. **How to Tailor Investment in a Green Economy – Identifying and Evaluating Opportunities in Green Sectors** *(United Nations Environment Programme/ Regional Office for North America, 900 17th Street, NW, Suite 506, Washington, DC 20006)*

This workshop will focus on three key areas of the Green Economy Initiative: renewable energy, green buildings and sustainable transport. Investing in renewable energy reduces greenhouse gas while generating more jobs. About 2.3 million people have found jobs in the renewable energy sector while projected investments of US\$630 billion by 2030 would translate into at least 20 million additional jobs in various renewable energy industries. A worldwide transition to energy-efficient buildings would create millions of jobs (2-3.5 million green jobs in Europe and the United States alone, and the potential possibly higher in developing countries) as well as “greening” existing jobs for the estimated 111 million people employed in the sector. In addition, the Intergovernmental Panel for Climate Change (IPCC) has indicated that the global fleet’s vehicle fuel economy needs to improve by 50 percent by 2050 to stabilize emissions from road transport. This can be achieved with the application existing technologies for the improvement light duty vehicles in both OECD and non-OECD countries. This application would also generate more than 3.8 million jobs. Investment in clean and efficient public urban transit transport also contributes secondary employment effects, with a multiplier of 2.5 to 4.1 per direct job created.

Organizer/Moderator:

Pavan Sukhdev, Project Leader, United Nations Environmental Programme (UNEP) Green Economy Initiative

Additional Discussants:

John Fullerton, Founder, Level 3 Capital Advisors, LLC

John Shilling, Chair of the Board of Trustees, Millennium Institute

Tom Paladino, President, Paladino & Company

35. **Green Business Certification – Certifying Office-Based and Retail Businesses** *(The George Washington University, Marvin Center, Room 309, 800*

21st Street, NW, Washington, DC 20052 – 3:00-5:00 pm)

From San Francisco to Montgomery County, Maryland there are green certifications, literally hundreds of approvals and certifications. This interactive workshop is for all who want to grasp the confusing world of green third party certifications. Using the case study of a DC-based green business certification program started in 2006, which has received support from local organizations and garnered interest from other cities. Learn what has worked and what has not, the savings achieved by companies that became certified, as well as the lessons learned. The presenters will share their diverse experiences gleaned from work in the trenches and offer practical tips for improving an organization's; bottom and top line - profitability, impact on the environment and society. You will walk away with a macro and micro understanding of green certification programs and potential costs and savings involved in achieving a green certification.

Organizer:

Anca Novacovici, President, Eco-Coach Inc.

Additional Discussants:

John Friedman, Chair, SB NOW Board of Directors; Sodexo, Inc.

Scott Pomeroy, Downtown DC Business Improvement District – partner in the program and pilot participant

Melissa Adams, Washington Gas – participant in the certification program

36. **From Political Action to Grassroots Action** (*The George Washington University, Marvin Center, Room 307, 800 21st Street, NW, Washington, DC 20052*)

The only way for us to push for strong climate legislation is to build people power and overcome the influence of dirty energy interests. By holding national actions and strengthening the grassroots network, we can make it happen – but only with your help. That is why we are taking it to the next level by connecting people to each other to do work on the ground that will put pressure on our elected officials. This workshop will give participants the knowledge and skills, to organize in their community, and outline what the Climate Precinct Captain program will do for you! Specifically the workshop will focus on: recruiting volunteers, organizing events and actions, mapping out your targets and creating political pressure.

Organizer:

Sarah Schwarz, Organizer, 1Sky

Additional Discussants:

Gillian Caldwell, Campaign Director, 1Sky

Ada Aroneanu, Organizer, 1Sky
Keith Harrington, Maryland Field Organizer, Chesapeake Climate Action Network (invited)

37. **The New Green Economy influenceXchange: Social Media Best Practices and Workshop** (*H. John Heinz III Center, 900 17th Street, NW, Suite 700, Washington, D. C. 20006*)

This presentation and workshop will clarify, examine and demonstrate the best practices and guidelines for how you can use social media to effectively be integrative into internal and external communication strategies, to build markets, to shift policy, to activate your base and network, to motivate and increase participation by your community, to enable your entity to become a well-oiled catalyst of change, to optimize your social media channels, tools and platforms, to enable collaboration and transparency, and to most importantly, create a clear social media process with specific executional steps, monitoring with robust return on investment, tracking, mapping and quantification.

Ideal for the following sectors: business to consumer, business to citizen, business to business, business to government, ngo to business and ngo to government.

Bring your tape recorders and note pads!

Organizer:

Michael Leifer, CEO & Cultural Anthropologist, influenceXchange and Co-Founder, Eco Dads

Discussants:

Abraham Kneisley, Senior Strategist, influenceXchange

39. **Undergraduate Public Health Studies: Integrative Strategies, Curricular Frameworks, and Ongoing Networks** (*Grand Hyatt, 1000 H Street, NW, Washington, DC 20001*)

Undergraduate public health studies is an emerging field that intersects in complex ways with environmental and sustainability sciences. These popular fields address real-world problems that require integration of evidence-based decision making with social and civic responsibility, and theory with practice. Workshop participants will explore and develop curricular, co-curricular, and programmatic elements of health and sustainability studies that can be used to build bridges to other integrative learning efforts on campuses—including civic engagement and service learning, and health and justice. The workshop is open to individuals and institutions engaged in any stage of

interdisciplinary work in health and sustainability. Participants will also gain an overview of the Educated Citizen and Public Health initiative's resources at the Association of American Colleges & Universities.

Organizer/Moderator:

Susan Albertine, Senior Director, LEAP States Initiative, Association of American Colleges & Universities

Co-Moderator:

Richard K. Riegelman, Professor of Epidemiology and Biostatistics and Founding Dean, School of Public Health and Health Services, The George Washington University

Additional Discussants:

Ruth Gaare Bernheim, Director, Master's of Public Health Program, University of Virginia
Shirley S. Tang, Assistant Professor of Asian American Studies and American Studies, University of Massachusetts Boston

Caryl Waggett, Assistant Professor, Department of Environmental Science, Allegheny College; Co-Chair, Environment and Health Committee, Council of Environmental Deans and Directors

William Sullivan, Professor, Landscape Architecture, University of Illinois; President, Council of Environmental Deans and Directors (January 2010 to January 2012)

40. **Measuring Ecosystem Services with GIS**

(American Forests, 73415th St. NW, Suite 800, Washington DC)

Participants will learn how to use GIS (Geographic Information Systems) and American Forests' CITYgreen software to measure ecosystem services. They will learn how changes to land cover and land use affect air quality and water quality and how to measure these changes.

Covered topics will include the fundamentals on how to create a land cover map for their community; the resources needed to conduct an ecosystem analysis; how to do a change over time analysis; how to model future scenarios and how to use these tools to make better decisions when faced with future growth.

Organizer:

Michael Lehman, Vice President, Urban Ecosystem Center, American Forests

Moderator:

Binesh Maharjan, GIS/Image Analyst Specialist, American Forests

Additional Discussants:

Gary Moll, Sr. Vice President, Urban Ecosystem Center, American Forests

41. **(Afternoon-Only) Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002)**

(Washington Club, 15 Dupont Circle, NW, Washington DC 20036)

**This afternoon portion of workshop 01 will summarize the morning breakout sessions and address the topic of climate change. Specifically, it will focus on LCA and GHG accounting protocols to differentiate global impacts from Arctic impacts. The SCS-002 committee will vote on the draft standard at the close of the session.*

This workshop is an open SCS-002 Committee meeting and will explain the foundations of an LCA-based environmental performance assessment and provide an overview of impact category indicators. We will explore the draft standard's metrics and algorithms for calculating impacts related to energy resources, strategic metals, air, water, climate, habitats and species.

The SCS-002 draft standard, currently being developed under the ANSI process, uses the best available science to calculate accurate, technology-neutral, and verifiable environmental impacts and normalize them per unit of product or service, allowing for comparisons and quantifiable improvements. The methodology complies with ISO 14044 life cycle assessment framework for environmental performance declarations.

Organizers:

Kimi Ceridon, Founder and Lead Sustainability Engineer, Kalepa Tech LLC
Stanley Rhodes, President and CEO, Scientific Certification Systems

Ashley Foster, Sustainability Manager, Scientific Certification Systems

Bill Karsell, Chairperson, SCS-002 Standards Committee

Facilitators:

Bill Heenan, Steel Recycling Institute (Air Quality and Emissions)

Steve Apfelbaum, Applied Ecological Services, Inc. (Landscape Disruption)

Steve Bradfield, MBDC (Non-Renewable Feedstock Resource Depletion)

Amy Costello, Armstrong World Industries (Ocean Acidification)

Katherine Gabor, Scientific Certification Systems (Human Toxicity)

Bill Karsell (LCA Approach to Climate Change)

Kimi Ceridon (Applications of LCA Standard in the Marketplace)

Discussants:

Kirk LaGory, Argonne National Laboratories (Landscape Disruption)

Mary McLearn, Electric Power Research Institute (Landscape Disruption)

Steve Apfelbaum, Applied Ecological Services, Inc, (Landscape Disruption)

Eladio Knipping, EPRI (Air Quality Emissions)

Fred Lipschultz, NASA & JSOST Interagency Working Group on Ocean Acidification (Ocean Acidification)

James A. Luppens, USGS (Non-Renewable Feedstock Resource Depletion)

Katherine Gabor, Scientific Certification Systems (Human Toxicity)

Michael MacCracken, The Climate Institute (Climate)

Karl Hausker, ICF International (Climate)

Stanley Rhodes (LCA)

Colin High, RSG (LCA)

Urban tree cover provides \$400 billion in stormwater, air quality, energy, and water quality benefits to cities each year. Try CITYgreen for ArcGIS computer software, and put the value of natural resources into your community.

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calculating the value of nature
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for more information:
AMERICAN FORESTS : P.O. Box 2000 : Washington DC 20013
Phone: 800.368.5748 : E-mail: cgreen@amfor.org
www.americanforests.org

AMERICAN FORESTS
www.americanforests.org

Detailed Agenda

Note: Sessions Located in Atrium Hall Unless Otherwise Noted

- 8:00 am **Registration Opens**, Green Pioneers Exhibition and Scientific Poster Session open;
Continental Breakfast (*Atrium*)
Images by Gary Braasch © 2010 World View of Global Warming
Conference Highlights, Green Economy TV by WebsEdge
- 8:45 am **Welcome: Ambassador Richard Benedick**, President, NCSE
Keynote Addresses: The New Green Economy: (How) Can We Get There From Here?
- **Charles Holliday**, Chairman and CEO Emeritus, DuPont
 - **William Spriggs**, Asst. Secretary, U.S. Dept. of Labor
 - **Lisa Jackson**, Administrator, U.S. EPA
- 10:15 am **Plenary Roundtable: Growing the Green Economy or Greening the Grown Economy?**
- Moderator: **Robert Costanza**, Professor and Director, Gund Institute for Ecological Economics, University of Vermont; Editor in Chief, *Solutions Journal*
 - **Mindy Lubber**, President, Ceres
 - **Van Jones**, author, *The Green Collar Economy*
 - **Tim Jackson**, Economics Commissioner, UK Sustainable Development Commission and Professor of Sustainable Development, University of Surrey
- 11:15 am **Plenary Roundtable: What is the Role of Science, Technology and Education in Greening the New Economy?**
- Moderator: **David Gergen**, Director of The Center for Public Leadership; Harvard University
 - **Michael Crow**, President, Arizona State University
 - **Richard Freeman**, Herbert S. Ascherman Professor of Economics, Harvard University
 - **Martha Kanter**, Under Secretary, U.S. Department of Education
 - **Congressman Rush Holt** (D-NJ)
 - **Kyung-Ah Park**, Vice President, Environmental Markets Group, Goldman, Sachs & Co.
- 12:15 pm **Lunch on your own – Breakout Session leaders will meet in the International Gateway Room**
Book Signings (*Atrium Hall, Mezzanine Level*):
- **Tim Jackson**, author of *Prosperity Without Growth*
 - **Gus Speth**, Author of “The Bridge at the End of the World”
- 1:30 pm-
5:00 pm **Breakout Sessions** (*concurrent*)
**Certain sessions will be held at the J.W. Marriott Hotel located across Pennsylvania Avenue from the Ronald Reagan Building*
- Higher Education – Business Education**
01. Educating Interdisciplinary Business Leaders for a Sustainable Future (*MD Classroom C1*)
- Business/Professional Education**
02. The Greenhouse Gas Professional: The State and Future of Climate Policy’s Practitioner Class (*Meridian C*)
- Higher Education**
03. A New Generation of Sustainability Leadership: The Role of Higher Education in Building a Green Economy (*MD Classroom C3*)

04. Green Collars and Green Places: Engaging Higher Education to Train the New and Diverse Generation of STEM Environmental Stewards (*MD Classroom C4*)
05. Aligning Science, Education and Economic Markets (*MD Classroom C5*)
- Community Colleges/Green Jobs***
06. Greenforce Training: How Community Colleges Fill a Vital Role in Education of Clean Energy Workers (Meridian B)
- Education – Federal Agency Role***
07. Transforming Federal Education Programs to Support the Transition to a Green Economy (Meridian E)
- Macroeconomics - Indicators***
09. Green Accounting for the Green Economy: Improving GDP and the National Accounts of the United States (Continental B)
- Macroeconomics – Tax Code***
10. Perverse Incentives, Subsidies, and Tax Code Impediments to a Sustainable Economy (Continental C)
- Natural Resources - Agencies***
11. Greening Federal Land Managing Agencies – Working With and Learning From Each Other (Marriott-Garden Terrace A)
- Natural Resources - Forestry***
12. Sustainable Forest Management at Multiple Scales: Underpinning and Advancing the Green Economy (Marriott-Garden Terrace B)
- Natural Resources – Ecosystem Services***
13. Does the Payment for Ecosystem Services (PES) Model Hold Promise? Building on Lessons from Available Evidence (Marriott-Justice)
- Communities - Local***
14. Strategies to Promote Sustainable Urban Planning and Development: Partnerships Between Academia, Citizens, and Local Government (Hemisphere B)
- Consumption***
15. Trading Material Affluence for Time Affluence: A Critical Step Toward the New Green Economy (Oceanic B)
- Energy***
16. Small Scale Distributive Energy Systems and Sustainability (Marriott-Russell)
17. Sun, Wind, and Wildlife: Promoting Responsible Renewable Energy Development (MD Classroom C6)
18. Ocean Energy: The Next Green Generation (MD Classroom C2)
19. Bridging the GREEN-GAP Between Environmentally-Sustainable Product Research and Commercialization (Marriott-Garden Terrace)
20. Green Grid Ironies (Horizon A)
- Climate***
21. The Economics of 350 (Classroom D)
22. After Copenhagen: The Economics and Physics of Implementing the COP 15 Agreements (Horizon B)
23. Carbon Equivalent Landscapes: Setting the Agenda and Implementing the Details (Meridian D)
- Entrepreneurism – Youth***
24. The Role of Young Entrepreneurs in the New Green Economy (Polaris A)
- Auto Industry***
25. Growing a New Vibrant “Green Auto Industry – Who, What, When, Where and How Do We Expedite It? (Marriott-Rayburn)
- Science***
26. Application of Green Chemistry in Decision-Making (Seminar Room 2, 7th Floor)
28. Green Economy Shifts in Science and Education (Polaris B)

Technology

29. What is “Green Technology” – How Do We Define It? How Do We Achieve It?
(Oceanic A)

Policy

30. Recommendation to the U.S. Government: How to Build a Public-Private Partnership for a Green Economy (Polaris C)

Information

31. Environmental Information Needs for a Green Economy (Continental A)

Water

32. Sustainable Water Reuse for a Green Economy: Developing Policy Recommendations
(Hemisphere A)

Sustainability

33. The Three Pillars of Sustainability: Paradigm Shifts and Opportunities for the Public and Private Sector (Marriott – Cannon & Hart)
34. Public and Private Sustainability Policy: Is a Green Economy Sustainable and How Would One Know? (International Gateway)

International – Developing Countries – Nontraditional

36. Development of Nontraditional Educational Systems Within Developing Countries to Create a New, Sustainable Economy (Seminar Room 1, 7th Floor)

Health

38. Opportunities and Barriers for Green Infrastructure and Buildings: The Case of Water Management (Classroom C)

5:30 pm

National Council for Science and the Environment Lifetime Achievement Award
Herman Daly, Ecological Economist, School of Public Affairs, University of Maryland
Presented by ***Jeffrey Leonard***, Member, NCSE Board of Directors and President, Global Environment Fund

5:50 pm

Recognition of Winners of Generation Green: Youth Essay Contest
Vadim Brutskiy, Kristen Powers, Derek Siegel, Emily Grubert, Alyssa Pandolfi, Swift Otter, Stephanie Hardjo, Emily Goldstein, Carrie Ross, Ann Condon, Amanda Boccuti
Presented by **Alec Loorz**, *Kids vs Global Warming*
(Sponsored by The Betsy and Jesse Fink Foundation)

6:00 pm

10th John H. Chafee Memorial Lecture on Science and the Environment:
"A New American Environmentalism and the New Economy"
James Gustave Speth, Distinguished Senior Fellow, Demos, New York City; Professor of Law, Vermont Law School; and Dean Emeritus, Yale School of Forestry and Environmental Studies
Welcome: Ambassador Richard Benedick, President, NCSE
Introduction of Speaker: A. Karim Ahmed, Secretary, Treasurer, NCSE Board of Directors

7:30 pm

Reception

8:30 pm

Student and Young Professional Networking Expedition
(Meet in Atrium Hall at Registration Desk)

Thursday Plenary Biographies

Keynote Address: The New Green Economy: (How) Can We Get There From Here?

Charles O. Holliday was the CEO of DuPont from 1998-2009 and chaired the Board from 1999 through 2009. He has led DuPont's well-recognized efforts towards sustainability, including reduction of global greenhouse gas emissions measured as CO₂ equivalents by 72% since 1990. Holliday is a member of the National Academy of Engineering, and is past chairman of: the Business Roundtable's Task Force for Environment, Technology and Economy; the World Business Council for Sustainable Development (WBCSD); The Business Council; and the Society of Chemical Industry – American Section. Holliday serves on the board of directors of Bank of America, Deere & Co., CH2MHILL, ClimateWorks Foundation and is Chair Emeritus of the board of directors of Catalyst. In addition, he is Chairman of the U.S. Council on Competitiveness and is a founding member of the International Business Council. He co-authored *Walking the Talk*, a book which details the business case for sustainable development and corporate responsibility.

Plenary Roundtable: Growing the Green Economy or Greening the Grown Economy?

Robert Costanza is a professor and Director of the Gund Institute for Ecological Economics at the University of Vermont. In addition to authoring or co-authoring over 300 scientific papers, he is editor in chief of the new journal, *Solutions*. Prior to this, he was Director of the University of Maryland Institute for Ecological Economics and a professor at the University of Maryland Center for Environmental Science. Costanza received his Master's degree in Architecture and Urban and Regional Planning and Ph.D. in systems ecology from the University of Florida. He is co-founder and past-president of the International Society for Ecological Economics (ISEE), former chief editor of the Society's journal: *Ecological Economics*, and currently serves on the editorial board of eight other international academic journals. He has been awarded the Society for Conservation Biology Distinguished Achievement Award and the Kenneth Boulding Memorial Award for Outstanding Contributions in Ecological Economics. Costanza was also selected as a Pew Scholar in Conservation and the Environment and received an honorary doctorate in natural sciences from Stockholm University.

Mindy S. Lubber is the President of Ceres, the leading coalition of investors, environmental organizations and other public interest groups working with companies and investors to build sustainability into the capital markets and address sustainability challenges such as global climate change. She also directs the Investor Network on Climate Risk (INCR), a network of more than 80 institutional investors representing over \$8 trillion in assets that coordinates U.S. investor responses to the financial risks and opportunities posed by climate change. Ms. Lubber is the recipient of the Skoll Social Entrepreneur Award and was recently voted one of "The 100 Most Influential People in Corporate Governance for 2009" by Directorship Magazine, who noted Ceres' substantial influence in its field. Before coming to Ceres, Ms. Lubber was the Regional Administrator of the U.S. Environmental Protection Agency and CEO of Green Century Capital Management, an investment firm managing environmentally screened mutual funds.

Van Jones is a globally recognized, award-winning pioneer in human rights and the clean energy economy. He is a graduate of the University of Tennessee, and of the Yale Law School (1993). Van is the author of *The Green Collar Economy*, the definitive book on "green jobs" and an instant New York Times bestseller. Van helped to pass America's first "green job training" legislation, the Green Jobs Act, which George W. Bush signed into law as a part of the 2007 Energy Bill. He is the co-founder of several successful non-profit organizations, including the Ella Baker Center for Human Rights and Green For All. From March to September 2009, Van worked as the special advisor for green jobs at the White House Council for Environmental Quality. The federal government made unprecedented progress toward increasing the number of green job opportunities available to all Americans.

Van is the recipient of many awards and honors, including the Reebok International Human Rights Award and the prestigious, international Ashoka Fellowship. He was included in the Ebony Magazine "Power 150" list of most influential African Americans for 2009. TIME Magazine named him an environmental hero in 2008 and named him one of the 100 most influential people in the world in 2009.

Tim Jackson is Professor of Sustainable Development at the University of Surrey and Director of the Research group on Lifestyles, Values and Environment (RESOLVE). Funded by the Economic and Social Research Council, the aim of RESOLVE is to explore the links between lifestyles, societal values and the environment. In particular, RESOLVE aims to provide evidence-based advice to policy-makers in the UK and elsewhere who are seeking to understand and to influence people's energy-related behaviors and practices. Since 2004 Tim has been Economics Commissioner on the UK Sustainable Development Commission and is the author of their controversial and groundbreaking report *Prosperity Without Growth – economics for a finite planet (Earthscan 2009)*. In addition to his academic work he is an award-winning playwright with numerous radio-writing credits for the BBC.

Plenary Roundtable: How Can Science, Technology and Education Help to Green the Economy?

Michael M. Crow became the 16th President of Arizona State University on July 1, 2002. During this time, he has committed the university to global engagement and a new standard for public service. He has led the establishment of interdisciplinary research initiatives such as the Biodesign Institute, the Global Institute for Sustainability, among others. Prior to joining ASU, he served as the executive vice provost of Columbia University, where he also was a professor in the School of International and Public Affairs. As the chief strategist of Columbia's research enterprise, he played a leading role in the establishment of the Science and Technology Ventures, the Strategic Initiative Program, the Columbia Digital Media Initiative, and the Columbia Earth Institute (CEI). He also co-founded the Center for Science, Policy, and Outcomes (CSPO) in Washington, DC, a think tank dedicated to linking science and technology to desired social, economic, and environmental outcomes. A fellow of the National Academy of Public Administration, he is the author of books and articles relating to the analysis of research organizations, technology transfer, science and technology policy, and the practice and theory of public policy.

Richard B. Freeman holds the Herbert Ascherman Chair in Economics at Harvard University. He is currently serving as Faculty Director of the Labor and Worklife Program at Harvard Law School. He directs the National Bureau of Economic Research / Sloan Science Engineering Workforce Projects, and is Senior Research Fellow in Labour Markets at the London School of Economics' Centre for Economic Performance. He is a fellow of the American Academy of Arts and Science and is currently serving as a member of the AAAS Initiative for Science and Technology. He received the Mincer Lifetime Achievement Prize from the Society of Labor Economics in 2006. In 2007, he was awarded the IZA Prize in Labor Economics. His recent publications include *What Workers Want* (2007 2nd edition), *Can Labor Standards Improve Under Globalization* (2004), *Emerging Labor Market Institutions for the 21st Century* (2005), *America Works: The Exceptional Labor Market* (2007), and *What Workers Say: Employee Voice in the Anglo American World* (2007). Professor Freeman has several forthcoming books including the IZA Prize book, *Making Europe Work: IZA Labor Economics Series* (2009).

Martha Kanter was appointed Under Secretary of Education on June 19, 2009. Prior to this, she was president then chancellor of the Foothill-De Anza Community College District, serving more than 45,000 students. In 1977, she established the first program for students with learning disabilities at San Jose City College (California). She then served as a Director, Dean and subsequently as Vice Chancellor for Policy and Research for the California Community Colleges Chancellor's Office in Sacramento, returning to San Jose City College as the vice president of instruction and student services in 1990. Kanter has been named Woman of the Year by the 24th Assembly District, Woman of Achievement by San Jose Mercury News and the Women's Fund, and Woman of the Year for Santa Clara County by the American Association of University Women. She has received the Excellence in Education award from the National Organization for Women's California Chapter. In 2006, she was honored by

the Santa Clara County Commission on the Status of Women, and in 2007, the American Leadership Forum-Silicon Valley honored her with the John W. Gardner Leadership Award. Last year, Kanter received the Citizen of the Year award from the Cupertino Chamber of Commerce.

Representative Rush Holt earned his B.A. in Physics from Carleton College in Minnesota and completed his Master's and Ph.D. at New York University. He has held positions as a teacher, Congressional science fellow, and arms control expert at the U.S. State Department. From 1989-1998, Holt was Assistant Director of the Princeton Plasma Physics Laboratory, the largest center for research in alternative energy in New Jersey. He has conducted extensive research on alternative energy and has his own patent for a solar energy device. He serves on the Committee on Education and Labor, the Committee on Natural Resources, the House Permanent Select Committee on Intelligence, and is the Chairman of the Select Intelligence Oversight Panel. He is the co-chair of the Research and Development Caucus, and sits on several Congressional caucuses concerning human and environmental rights. He is a member of the New Democrat Coalition, the Sustainable Energy and Environment Coalition, and the House Democracy Partnership. He has helped secure more than \$700 million for science and technology research, millions for protecting open space, and has led the effort to increase rail/transit security funding, most recently succeeding in doubling federal funding to \$400 million in 2008.

Kyung-Ah Park is Vice President of the Environmental Markets Group at Goldman, Sachs & Co. She is responsible for managing and driving environmental initiatives across the firm. She also helps manage the Center for Environmental Markets, which partners with nongovernmental organizations, academic institutions, and corporations to further market-based solutions to environmental issues. She joined Goldman Sachs in 1998 in the Mergers & Acquisitions Department in New York and also spent several years in the Advisory Group in Hong Kong. Most recently, she was Vice President in the Industrials Group in the Investment Banking Division. Prior to Goldman Sachs, she was a management consultant at McKinsey & Company. She received an MBA from Harvard Business School and BA from Yonsei University in Seoul, Korea.

Lifetime Achievement Award

9th John H. Chaffee Memorial Lecture on Science and the Environment

Herman E. Daly is an American economist who began researching the fusion of economics and ecology in the 1970s, highlighting the necessity to consider the laws of nature when structuring an economic system. His work supports the idea that for the human economy to subsist, it must function at a steady state within the productive and assimilative capacity of the Earth's ecosystem.

Prior to his research in ecological economics, Dr. Daly received his doctorate in Economics from Vanderbilt University in 1967 before becoming a professor at Louisiana State University (LSU). During this time he taught in Brazil at the University of Ceará and served as Visiting Fellow at the Centre for Resources and Environmental Studies of the Australian National University. He was also a Fulbright Senior Lecturer in Brazil and a recipient of LSU's Distinguished Research Master Award.

In 1988, Dr. Daly changed gears and worked as Senior Economist in the Environment Department of the World Bank where he helped design guidelines for sustainable development. In 1994 he resigned, choosing to return to the world of academia, but not before giving his well known farewell speech offering "prescriptions" for the World Bank and their efforts for sustainable development. Since then, he has been a professor at the School of Public Policy of University of Maryland at College Park.

During this time, Daly published several articles that contradicted much of the neoclassical economic general knowledge and also as co-founded *The Journal of Ecological Economics* in 1989. Other publications include *For the Common Good* (co-authored with John B. Cobb, Jr. - 1989; 1994), *Steady-State Economics* (Freeman, 1977; second edition, Island Press, 1991), and *Beyond Growth* (Beacon, 1996) (For a full list of publications visit: <http://ecoethics.net/bib/1997/ensh-006.htm>). In 1996, Dr. Daly received the Heineken Prize for Environmental Science awarded by the Royal Netherlands Academy of Arts and Sciences, as well as the Right Livelihood Award,

Sweden's alternative to the Nobel Prize. In 1999 he was awarded the Sophie Prize (Norway) for contributions in the area of Environment and Development; in 2001 the Leontief Prize for contributions to economic thought, and in 2002 the Medal of the Presidency of the Italian Republic for his work in steady-state economics.

10th John H. Chafee Memorial Lecture on Science and the Environment

James Gustave Speth recently joined Demos (New York City) as Distinguished Senior Fellow and in July, 2010, will take up his new position of Professor of Law at the Vermont Law School. In 2009 he completed his decade-long tenure as Dean, Yale School of Forestry and Environmental Studies. From 1993 to 1999, Gus Speth was Administrator of the United Nations Development Programme and chair of the UN Development Group. Prior to his service at the UN, he was founder and president of the World Resources Institute; professor of law at Georgetown University; chairman of the U.S. Council on Environmental Quality (Carter Administration); and senior attorney and cofounder, Natural Resources Defense Council. Throughout his career, Speth has provided leadership and entrepreneurial initiatives to many task forces and committees whose roles have been to combat environmental degradation, including the President's Task Force on Global Resources and Environment; the Western Hemisphere Dialogue on Environment and Development; and the National Commission on the Environment. Among his awards are the National Wildlife Federation's Resources Defense Award, the Natural Resources Council of America's Barbara Swain Award of Honor, a 1997 Special Recognition Award from the Society for International Development, Lifetime Achievement Awards from the Environmental Law Institute and the League of Conservation Voters, and the Blue Planet Prize. He holds honorary degrees from Clark University, the College of the Atlantic, the Vermont Law School, Middlebury College, and the University of South Carolina. He is the author, co-author or editor of six books including the award-winning *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* and *Red Sky at Morning: America and the Crisis of the Global Environment*.

Professor Speth currently serves on the boards of the Natural Resources Defense Council, World Resources Institute, Rockefeller Brothers Fund, Population Action International, The Center for Humans and Nature, 1Sky, and the Center for Sustainable Communities.

BREAKOUT SESSIONS

Thursday, January 21, 2010 from 1:30 pm to 5:00 pm

We will collectively develop a 21st century strategy aimed at ensuring the success of the “new green economy” through 35 concurrent Breakout Sessions. These sessions are facilitated participant discussions with the goal of generating recommendations for using science and education to improve and transform the economy in the direction of sustainability. NCSE thanks the many individuals who have volunteered their time and expertise to organize and participate in these breakouts. Because these are outcome-oriented working sessions, please plan to attend one session (generally the one for which you registered) for the entire 3.5 hour period.

01. **Educating Interdisciplinary Business Leaders for a Sustainable Future**

(MD Classroom C1)

Science and business have traditionally been segregated disciplines in both academia and professional practice. Decision makers leading contemporary innovation and “green” economic development are challenged by interdisciplinary problems with competing societal values and variables. This discussion will focus on current “best practice” business and education strategies that are fostering a more comprehensive framework for leadership development. Through an interdisciplinary forum discussion, panelists and attendees will help develop a set of recommendations to the Obama Administration and Congress to meet the need for transformative education opportunities that intersect between the environment, business, and education communities. Emphasis will be placed on developing an outline of competency expectations to inform development of proactive, collaborative program designs that integrate education and professional development components for emerging “Green Careers.”

Organizers:

Richard V. Pouyat, Bioclimatologist, USDA Forest Service/Ecological Society of America Science Committee

Phyllis Pouyat-Thibodeau, Consultant, MBA Professional Education/Career Programs, Robert H. Smith School of Business, University of Maryland

Moderator:

Richard V. Pouyat

Additional Discussants:

Mark Stoler, Director of Environmental, Health and Safety Operations, GE Ecomagination

Brian Childs, President, MBA Energy Club, R.H. Smith School of Business, United Nations Humanitarian Airlift Pilot, Afghanistan/Pakistan
Dennis Ojima, H. John Heinz III Center for Science, Economics and the Environment & Colorado State University

Richard C. Smardon, State University of New York, College of Environmental Sciences and Forestry

02. **The Greenhouse Gas Professional: The State and Future of Climate Policy’s Practitioner Class** *(Meridian C)*

Accurate, competent greenhouse gas measurement is a necessary requirement underpinning functional carbon markets, yet precious little attention is given to the practitioners who will actually measure and verify GHG data. This session will provide a holistic view of the state of GHG management as the industry moves towards professionalization. Specifically, panelists will: sketch out the state of today’s industry with a particular focus on accounting standards, educational opportunities, and common practice amongst market participants; discuss the impact of emerging programs and policy; profile the practical challenges and policy requirements facing the industry’s expansion; and outline what needs to be done to credibly bridge the looming competency gap, including but not limited to discussion of requirements pertaining to education, professionalization, and regulation.

Organizer:

Tim Stumhofer, Program Associate, GHG Management Institute

Additional Discussants:

David Sigler, Managing Director, Greenhouse Gas Management Institute

Alexia Kelly, Senior Associate, World Resources Institute

Wiley Barbour, Vice President, Camco International

03. A New Generation of Sustainability Leadership: The Role of Higher Education in Building a Green Economy
(MD Classroom C3)

The converging challenges of species extinction, the loss of biodiversity, the gap between rich and poor, a struggling economy and climate destabilization present a planetary emergency. A green economy is a response to this planetary challenge. This calls for a radical reshaping of the role of higher education in preparing a new generation of sustainability leadership. This is much more than providing technical training. It demands a new educational paradigm for integrating life cycle analysis, ecological concepts, ecological economics, and earth systems science into all aspects of higher education. How can we encourage colleges and universities restructure their curriculum, reorganize their infrastructure, and recalibrate their missions? How do businesses develop entrepreneurial solutions that employ a generation of college-age students who are demanding meaningful and relevant jobs?

Organizer:

Anthony Cortese, President, Second Nature

Additional Discussants:

Mitchell Thomashow, President, Unity College

Jim Buizer, Science Policy Advisor to the President, Arizona State University

Paul Rowland, Executive Director, Association for the Advancement of Sustainability in Higher Education

04. Green Collars and Green Places: Engaging Higher Education to Train the New and Diverse Generation of STEM Environmental Stewards

(MD Classroom C4)

Science and education will help create a sustainable economy and future through introducing the broader US population to sustainability goals and service oriented learning. In this session perspectives from an 1862 and an 1890 land grant institution Colorado State University and Florida A&M University will frame the discussion on the challenges of creating and implementing curricula and co-curricular activities, including experiential-based and service learning, that produce diverse BS, MS, and Ph.D. STEM environmental stewards and work corps for the emerging green economy in light of rapidly changing demographics. Discussants will cover the integration of diversity, environmental awareness and stewardship among youth, sustainable development,

green energies, and higher education necessary in green collar workforce development.

Organizers:

Gillian Bowser, Assistant Dean, Warner College of Natural Resources, Colorado State University
Richard D. Schulerbrandt Gragg III, Associate Director, Environmental Sciences Institute, Florida A&M University

Larry Robinson, Vice President for Research, Florida A&M University

Moderators:

Gillian Bowser

Richard D. Schulerbrandt Gragg III

Additional Discussants:

Art Hutchinson, Superintendent, National Park Service, Great Sand Dunes National Park & Preserve

Mark Brown, Director, The Institution for Learning and Teaching, Colorado State University

Richard Hope, Vice President, Woodrow Wilson National Fellowship Foundation, Princeton

Jacqueline J. Rousseau, Director, Educational Partnership Program & Student Scholarships and Associate Director for Student Activities, National Oceanic and Atmospheric Administration

05. Aligning Science, Education, and Economic Markets (MD Classroom C5)

The session goals are to:

1. Identify new approaches to green workforce education (formal and informal)
2. Develop strategies for the implementation of green workforce education

Education for the new green economy involves substantial breaks with past practices and paradigms. At undergraduate and graduate university and community college levels, there is a broad-based need to modify existing programs to orient the student body to the realities of climate change, environmental sustainability, and social responsibility. This will require strong academic leadership plus integration with business and science leading to new techniques of awareness-raising and knowledge sharing.

The panel will present experiences of successful programs that combine environmental management with the traditional MBA, a similar program in crisis management, and specialized environmental leadership training program models within corporate settings. While these have been successful, more needs to be done with strategic paradigms to integrate environmental themes into the core of management training. With the panel's review along with input and discussion among session participants,

recommendations will be developed for curriculum change and new paradigms so that professional degrees and business management training can define "green" as the way of doing business.

Organizer/Moderator:

Mantha Mehallis, Director and Professor, Environmental MBA Program, Florida Atlantic University

Additional Discussants:

Leonard Berry, Director & Distinguished Professor, Florida Center for Environmental Studies, Florida Atlantic University

Elaine Heldewier, Environmental Director, Carnival Cruise Lines

Nelson Saldanha, President, Cepemar Environmental Services and Chairman of the Board of Grupo Cepemar, Brazil

David Campbell, Professor of Geography and former Associate Dean of Social Sciences, Michigan State University

06. Greenforce Training: How Community Colleges Fill a Vital Role in Education of Clean Energy Workers (Meridian B)

Long-term sustainability requires that we create an educational system that prepares students with the skills they need to help build a new, green economy. Community colleges are among the most important platforms for teaching these students.

Between training workers for solar, wind, geothermal and other renewable energy careers, and instilling an ethic of sustainability on their own campuses, these schools are ensuring that the supply of graduates qualified to participate in a green economy keeps up with demand, while also providing promising new pathways out of poverty for many.

This session will highlight exemplary programs and describe their curricula, outline the opportunities available for schools who want to begin training, and brainstorm solutions to emerging challenges.

Organizers:

Julian Keniry, Senior Director of Campus and Community Leadership, National Wildlife Federation

Xarissa Holdaway, Campus E-News Coordinator, National Wildlife Federation

Moderator:

Julian Keniry

Additional Discussants:

Gloria Mwase, Program Director, Jobs for the Future

Debra Rowe, President, U.S. Partnership for Education for Sustainable Development; Professor, Oakland (MI) Community College

Mindy Feldbaum, Director for Workforce Development Programs, Academy for Educational Development

07. Transforming Federal Education Programs to Support the Green Economy (Meridian E)

The U.S. transition to a green economy is a monumental shift requiring a level of expertise, innovation, and cooperative effort unseen since the 1940s war effort to meet the challenges involved. Education at all levels has a critical role to play in preparing the country for this transition by providing the knowledge and skills necessary for the public to understand and participate in the green economy. This session will explore how federal education programs and policies in agencies and departments such as NSF, ED, NOAA, EPA, HHS, Energy, Labor, Agriculture, and others might be modified or strengthened to help advance this transition. Participants will create a list of these programs with suggested adjustments and ranked by importance and impact for submission to the Administration and Congress.

Organizer/Moderator:

James L. Elder, Director, Campaign for Environmental Literacy

Additional Discussants:

Kevin Coyle, Vice President of Education, National Wildlife Federation

Judith Ramaley, President, Winona State University

09. Green Accounting for the Green Economy: Improving GDP and the National Accounts of the United States (Continental B)

For years, economists and politicians have wrestled with the concept of rising Gross Domestic Product (GDP) as a measure of progress. Even the father of national income accounting, Nobel laureate Simon Kuznets, warned the U.S. Congress in 1934 that "The welfare of a nation can scarcely be inferred from a measurement of national income." Critiques of GDP have a long history, and they are gathering steam. It has become clear that national accounts need an overhaul. The purpose of this session is to produce recommendations for the Bureau of Economic Analysis to improve the set of national accounts and report indicators that measure progress toward a new green economy. Special attention will be focused on the barriers to implementing recommended modifications to the national accounts.

Organizers:

Rob Dietz, Executive Director, Center for the Advancement of the Steady State Economy (CASSE)

Jon Erickson, Associate Professor and Managing Director, Gund Institute for Ecological Economics, University of Vermont

Moderator:

Rob Dietz, Center for the Advancement of the Steady State Economy (CASSE)

Additional Discussants:

Tim Jackson, Economics Commissioner to the UK Sustainable Development Commission; Professor of Sustainable Development, University of Surrey

Sean McGuire, Director of Sustainability Policies, Office for a Sustainable Future, Maryland Department of Natural Resources

Brent Moulton, Associate Director for National Accounts, U.S. Bureau of Economic Analysis

John Talberth, Senior Economist, People and Ecosystems Program, World Resources Institute

10. **Perverse Incentives, Subsidies, and Tax Code Impediments to a Sustainable Economy** (*Continental C*)

Subsidies, taxes, and other economic incentives have major effects on supply and demand throughout the economy. Transitioning to a new green economy will be hampered by resource extraction subsidies and various perverse incentives in the U.S. tax code, including elements that induce rapid population growth, high levels of consumption, and the production and consumption of energy-intensive items. Conversely, numerous opportunities exist for greening the tax code. Indeed, a new green economy is almost unfathomable in the absence of widespread, significant tax reform and elimination of resource extraction subsidies. This breakout session is designed to review some of the most important subsidies, taxes, and other economic incentives relevant to environmental protection and economic sustainability. The review will segue into a set of corrective policy recommendations.

Organizer/Moderator:

Brian Czech, President, Center for the Advancement of the Steady State Economy (CASSE)

Additional Discussants:

Brent Blackwelder, Past President, Friends of the Earth

Ryan Alexander, President, Taxpayers for Common Sense

Roy Beck, Executive Director, NumbersUSA

11. **Greening Federal Land Managing Agencies – Working With and Learning from Each Other** (*Marriott-Garden Terrace A*)

This session will provide information about the National Park Service's longstanding Climate Friendly Parks program, as well as FS, USFWS, and FEMP's greening/sustainability efforts. We will also discuss lessons learned so far, developing and implementing a Green Workforce –improving the system in place as well as engaging American youth in "green" careers and education programs. Lastly, we will discuss ways in which the best of each agency can be adapted to other Federal and State Agencies.

Organizer:

Julie McNamee, Air Resources & Climate Change Liaison, National Park Service

Additional Discussants:

Kevin Kilcullen, U.S. Fish & Wildlife Service, Chief, Visitor Services

Victoria Arthur, Conservation ED Specialist, USDA Forest Service

Matt Gray, Analyst, Sustainability & GHGs, Department of Energy, Federal Energy Management Program

12. **Sustainable Forest Management at Multiple Scales: Underpinning and Advancing the Green Economy** (*Marriott-Garden Terrace B*)

Sustainable development recognizes that sustainable management and use of trees, woodlands, and forests to maintain and improve the natural resource base underpins the green economy through sustainable consumption and production patterns and practices. The sustainable forest management creates jobs aimed at protecting the natural resource base through restoration and enhancement activities; and market-based efforts linked to water and other ecosystem services, recreation and tourism.

A common framework, known as the Montreal Process Criteria & Indicators for Sustainable Forest Management, has been developed by public and private entities in the United States working with eleven other countries of the world.

In Baltimore County, Maryland, the Department of Environmental Protection and Resource Management is using the Montreal Process Criteria as a framework to advance a Forest Sustainability Program linked to its Green Renaissance Initiative. Both inform land use discussions, support public and private sector investments, and foster the sustainable management of water and forest resources.

The State of Maryland's Department of Natural Resources is incorporating concern about the loss and fragmentation of forests into a strategic statewide

effort focusing on the state's important natural forest lands and how they relate to the State's green infrastructure. Assessment data, indicators, and computer tools are being used for interstate watershed planning for the Chesapeake Bay watershed as well as county planning, watershed planning, landowner outreach, and more.

Organizers:

USDA Forest Service

Baltimore County Department of Environmental Protection & Resource Management

Maryland Department of Natural Resources

Moderator:

Peter Gaulke, Strategic Planning & Sustainability, USDA Forest Service (National Forest System)

Additional Discussants:

Richard Guldin, Director, Quantitative Sciences, USDA Forest Service (Research & Development)

Donald Outen, Natural Resource Manager, Baltimore County Department of Environmental Protection & Resource Management

Steven Koehn, State Forester, Maryland Department of Natural Resources

13. Does the Payment for Ecosystem Services (PES) Model Hold Promise? (Marriott-Justice)

This session will engage attendees in a structured conversation about the role of PES mechanisms, evidence of their strengths and weaknesses via an analysis of past and current projects, and their efficacy in solving environmental crises. We will focus on moral and ethical concerns that delve into issues such as placing monetary values on nature, practical concerns of baseline development, additionality, and payment methods, legal issues related to how PES mechanisms fit into larger regional and national legal frameworks, and political questions of capacity of state actors that run the program, participation by community members, NGOs and other local actors, and the sustainability of PES programs to withstand shifts in bureaucratic politics or electoral changes in national or local politics.

Organizer:

Gautam Sethi, Associate Professor, Bard College Center for Environmental Policy

Additional Discussants:

Monique Segarra, Assistant Professor, Bard Center for Environmental Policy, Bard College

Stephen Yamasaki, Analyst, New Forests

Sarah Lynch, World Wildlife Fund, Director, Agriculture

Jim Salzman, Professor of Law, Nicholas School of the Environment, Duke University
Stefano Pagiola, Economics Unit, Sustainable Development Department, Latin America and Caribbean Region, The World Bank

14. Strategies to Promote Sustainable Urban Planning and Development: Partnerships Among Academia, Citizens and Local Government (Hemisphere B)

In cities, towns, and counties across the United States, local governments have been trying pull the dual imperatives of economy and environment into a cohesive approach to sustainability. Avenues for implementing sustainable practice and encouraging green economic development exist or can be created in many places, such as city ordinances, local initiatives, comprehensive plans, inter-governmental agreements, smart growth “checklists”, and more. In this breakout session we will share cases that highlight community efforts to become more sustainable and promote green economic practice. From both success and “lessons learned” stories, we will create a set of cohesive recommendations for mechanisms and strategies for promoting sustainable urban planning and green economic development, and suggest state- and federal-level actions that would support such strategies.

Organizer:

Karin Warren, Chair of Environmental Studies, Randolph College, Chair of the Natural Resources Advisory Committee, City of Lynchburg, VA

Additional Discussants:

Rick Barnes, Professor of Psychology & Environmental Studies, Planning Commissioner, City of Lynchburg, VA

Michael Gillette, Lynchburg City Council, and President, Bioethical Services of Virginia, Inc.

Margaret Peet, Board member, ColorBrightonGreen.org; Chair, Water Education Collaborative

Karen Plaut Berger, The Harley School, Rochester, NY; Co-director, ColorBrightonGreen.org

Missy Stults, Regional Program Manager, ICLEI – Local Governments for Sustainability USA

15. Trading Material Affluence for Time Affluence: A Critical Step Toward the New Green Economy (Oceanic B)

Participants in this session will argue that technological change alone is not sufficient to create a sustainable society. We will argue that it is necessary to trade portions of future gains in productivity for

time instead of stuff as a requirement on a finite planet. We will stimulate a conversation regarding new studies in “Happiness Science” and “time affluence.” We will share examples of “best policies” in other countries along these lines and develop policy and educational recommendations for promoting time affluence as a substitute for unsustainable materialism. We argue that the current recession is a particularly appropriate time to raise such issues in order to begin to achieve full employment while at the same time improving sustainability.

Organizer/Moderator:

John de Graaf, Executive Director, Take Back Your Time, Seattle, WA

Additional Discussants:

David Batker, Executive Director, Earth Economics, Tacoma, WA

Anmarie Widener, lecturer, Georgetown University

16. **Small Scale Distributive Energy Systems and Sustainability** (*Marriott-Russell*)

Distributive energy generation means energy produced close to where it is used. Distributive energy could include onsite generation, self-generation, co-generation or any generation not provided centralized power plants. Assessing where small-scale distributive energy systems are the most appropriate is partially a science question, and partially a policy question. This session will focus on:

- How do the three pillars of sustainability relate to small-scale distributive energy?
- What are the advantages and disadvantages of small-scale distributive energy?
- How can energy policy support small-scale distributive energy systems?

The discussion will be framed by the changing paradigm of the transition from the age of environmentalism to the age of sustainability, challenges of wicked problems, and the lack of good models for public engagement around this challenge.

Organizers/Moderators:

Gary Radloff, Policy Director, University of Wisconsin-Madison, Wisconsin Bioenergy Initiative

Pete Nowak, Professor, Gaylord Nelson Institute for Environmental Studies, University of Wisconsin-Madison

17. **Sun, Wind, and Wildlife: Promoting Responsible Renewable Energy Development** (*MD Classroom C6*)

Development of renewable energy provides important benefits to our nation; enhancing our energy security and helping us shift away from climate-damaging

fossil fuels. But these benefits and opportunities come with great responsibility and risk; the intense new effort to promote wide scale development of renewable energy sources and related transmission facilities threatens serious and widespread impacts on wildlife, habitat and ecosystems. Renewable energy development, including development of associated transmission facilities, must be carried out in a way that avoids significant adverse impacts on wildlife and ecosystems and minimizes and mitigates those impacts that are unavoidable. This breakout session will look at the efforts already underway and those that are needed to ensure that renewable energy is developed responsibly and in a manner that protects wildlife and ecosystems.

Organizer/Moderator:

Wm. Robert Irvin, Senior Vice President for Conservation Programs, Defenders of Wildlife

Additional Discussants:

Michael Bean, Counselor to the Assistant Secretary for Fish, Wildlife and Parks, U.S. Department of the Interior

Kim Delfino, California Program Director, Defenders of Wildlife

Katherine Gensler, Manager, Regulatory & Legislative Affairs, Solar Energy Industries Association

Linda Lance, Senior Counsel, Majority Staff, U.S. Senate Energy and Natural Resources Committee

Steven P. Quarles, Partner and former chair of the Environment & Natural Resources Group, Crowell & Moring LLP

Chris Topik, Professional Staff, U.S. House of Representatives, Committee on Appropriations, Subcommittee on Interior, Environment, and Related Agencies

18. **Ocean Energy: The Next Green Generation** (*MD Classroom C2*)

Nationwide, and especially in Florida, there is a pressing need to develop a range of renewable energy resources. The Center for Ocean Energy Technology at Florida Atlantic University has taken a comprehensive approach to investigate all aspects of the research, development and deployment of ocean energy technologies as related to ocean current and thermal energy conversion. The Center is working in collaboration with a cross-disciplinary “industry-wide” team of scientists, engineers, educators, and policy experts to research, test, develop and manage the technologies and their interactions with the marine environment and the ecosystem. In addition, attention is being in the early stages of this industry to address developing global standards criteria for ocean renewable energy.

Organizer/Moderator:

Susan H. Skemp, Executive Director, Center for Ocean Energy Technology, Florida Atlantic University

Additional Discussants:

Alfred M. Duda, Acting Team Leader, Land and Water Resources, GEF Secretariat

William Daughdrill, Principal Scientist, Ecology and Environment, LLC

Howard P. Hanson, Scientific Director, Center for Ocean Energy Technology, Florida Atlantic University

Sean O'Neill, President, Ocean Renewable Energy Coalition

19. **Bridging the GREEN GAP Between Environmentally-Sustainable Product Research and Commercialization**

(Marriott-Garden Terrace)

Moving new products from a research environment into a successful commercialized end product has always been a significant challenge. Some estimates indicate that over 85 percent of innovative new ideas are lost in the transformation from laboratory to commercial production. This is proving to be very true for new innovative green products also during the commercialization process. This session will describe and integrate programs that have been used previously to implement successful technology transfer to commercial products and evaluate their application for today's green product revolution. The panel will discuss the pit falls and challenges that "bridging the green gap" will have and suggest actions and policies that will enhance the potential for successful commercialization.

Organizer:

William E. Roper, Senior Advisor, Dawson & Associates

Moderator:

Susan Jenkins, Energy Biosciences Institute, University of California Berkeley and Council of Energy Research and Education Leaders (CEREL)

Additional Discussants:

Katta Jayaram Reddy, School of Energy Resources, University of Wyoming and Council of Energy Research and Education Leaders (CEREL)

David Rigby, President, Waste Water Management, Inc.

Alfonso Blanco, Program Manager, U.S. Environmental Protection Agency, Office of Waste Water Management

Loraine Green, Sustainable Technologies Consultant, Sustainable Systems

Design/Development

David Muchow, President & CEO, Skybuilt Power Systems

20. **Green Grid Ironies (Horizon A)**

This session looks at five major electrical-grid infrastructure topics and possible confounding issues.

1. TRANSMISSION: a need for more high-voltage transmission line construction (in light of an increase in power demand) is offset by the growth of microgrids.
2. ELECTRIFICATION of transportation will increase motor efficiency but might also entail more power plants.
3. SMART GRID: even as the grid powers the internet and introduces active metering in the home, grid reliability issues are still considerable.
4. MILEAGE STANDARDS FOR POWER PLANTS: most power plants still throw away two-thirds of their input energy, but antiquated regulations stand against innovation.
5. CAPTURING CARBON: even as renewable energy is promulgated in a variety of ways, use of plentiful fossil fuel will probably continue at high levels for years to come.

Organizer/Moderator:

Phillip F. Schewe, Chief Science Writer, American Institute of Physics; author of "The Grid: a history of the electrical network in the U.S." (published 2007).

Additional Discussants:

Cathy O'Riordan, Vice President for Physics Programs, American Institute of Physics

Dick Munson, Senior Vice President, Public Affairs, Recycled Energy Development

Michael Lubell, Director of Public Affairs, American Physical Society

20. **The Economics of 350 (Classroom D)**

The session will feature the research of E3's climate taskforce in support of stabilizing the climate system. The session will present the economic evidence in support of mitigating climate risks, explain why earlier analyses reached different conclusions, and present an alternative approach to climate policy that draws on new economics research on uncertainty and reframes the issues as insurance against catastrophic, low-probability events. It will also outline the principles and evidence in support of an equitable distribution of the burdens of domestic climate policy. This session will equip participants with a better understanding of the economics of climate change, dispel the myths that economics does not support climate action, and offer concrete recommendations for how the US can respond equitably to the climate crisis.

Organizer/Moderator:

Kristen Sheeran, Director, Economics for Equity and the Environment Network

Additional Discussants:

Frank Ackerman, Senior Economist, Stockholm Environment Institute – U.S. Center, Tufts University

Stephen J. DeCanio, Professor of Economics Emeritus, University of California Santa Barbara

James Boyce, Professor of Economics, Director of the Program on Development, Peacebuilding, and the Environment at the Political Economy Research Institute, University of Massachusetts Amherst

22. After Copenhagen: The Economics and Physics of Implementing the COP 15 Agreements (Horizon B)

Whatever agreements come out of COP15, the future direction of the United States will be guided largely by the actions of local and regional governments. Many people concerned about climate change see it as the symptom of a much larger problem: the absence of sustainable development. How do we therefore bring about sustainable development as a prescription for climate change at the local and regional level? What are the roles of government, the private sector and non-government organizations in effecting this change? How might we set planning priorities based on sustainable development? How do we bring about the incremental change necessary to transition to a sustainable future? Fortunately this session features speakers who have a wealth of knowledge and experience to address the simple question “how do we do it?”

Organizer:

Third Planet (a non-profit foundation)

Moderator:

Robert Farmer, President, Third Planet, St. Augustine, Florida

Additional Discussants:

Herman E. Daly, Professor, University of Maryland School of Public Policy, College Park, Maryland

Bernd Steinmüller, Founder and Owner, Bernd Steinmüller Sustainability Management Consulting (BSMC), Paderborn, Germany

Peter Fox-Penner, Principal and Chairman-Emeritus, The Brattle Group, Washington, DC

23. Carbon Equivalent Landscapes: Setting the Agenda and Implementing the Details (Meridian D)

This session will discuss and identify realistic methods to rejuvenate existing, damaged or depleted

industrial and cultural landscapes to be economically and environmentally sustainable. The focus will be the coal mining lands of North America and how they can be restored over time to re-balance their historical CO2 production while also being settings for long-term economic, human, and environmental prosperity. The knowledge of all session participants will be elicited to contribute to the session result. The session seeks to produce 12 coordinated and holistic action items for the governmental, private, foundation, and civil sectors of society to implement, guiding the production of: food, renewable energy, the efficient use of energy, renewable/recyclable/recycled materials and products, and to become large scale landscape processors of waste, especially wastewater.

Organizers:

Third Planet

David N. Benjamin, Senior Advisor, John Todd Ecological Design/Third Planet

Moderator:

David N. Benjamin, Senior Advisor, John Todd Ecological Design/Third Planet

Additional Discussants:

Jon Todd, President, John Todd Ecological Design

Friedrich von Bismarck, Director, Joint Governmental Agency for Coal Mine Rehabilitation

Christopher Barton, Associate Professor, Department of Forestry, University of Kentucky

24. The Role of Young Entrepreneurs in the New Green Economy (Polaris A)

A “new green economy” will rely on both retargeting of established businesses and also the launch of entrepreneurial businesses that pursue new opportunities. To create a rich green economy, we will be well-served to equip the young with the tools they need to pursue entrepreneurial opportunities. This session will feature young entrepreneurs and those who work with them. It will explore business experiences of young entrepreneurs; educational offerings, networking opportunities, and other support (such as contests and competitions) for young entrepreneurs and potential entrepreneurs. The goal of the session will be to develop recommendations on how to support green entrepreneurship.

Organizers:

April Richards, Deputy Director, EPA’s Small Business Innovation Research (SBIR) Program

Cynthia Nolt-Helms, Program Manager, P3: People, Prosperity and the Planet, EPA

Diana Bauer, Policy Analyst, DOE

Additional Discussants:

Gavin McIntyre, Chief Scientist, Ecovative Design

John Bissell, CEO, Micromidas
Humera Fasihuddin, Innovation to Venture Program Director, National Collegiate Inventors and Innovators Alliance
Rex Northern, Executive Director, Cleantech Open
Ethan Byler, Manager, Strategic Initiatives and Innovation, American Society of Mechanical Engineers
Claire Williams, CEO, Silver Springs, LLC

25. Growing a New Vibrant “Green” Auto Industry – Who, What, When, Where and How Do We Expedite It?

(Marriott-Rayburn)

Automobiles play a major role in the U.S. economy – as a major source of pollutants, petroleum dependence, and jobs. They are also a key part of the U.S. culture. Especially at a time when this important sector is “on the ropes,” it is vital that a discussion of the “new green economy” include reinventing the automobile industry for the future. Topics include: What is the future of transportation? Who are the players now? What are the vehicles of today and tomorrow? What’s the transition? What is the consumer’s role? Government’s role? Academia’s role? The media’s role? The worker’s role - union and non-union? Where are these vehicles going to be made? What jobs will be created and where? When and how do we speed it up?

We will develop 8-12 recommendations to be sent to the Obama Administration, Congress, and other stakeholders, including the unions and auto industry leaders.

Organizer/Moderator:

Joan Michelson, Joan Michelson & Associates

Additional Discussants:

Jeremy Anwyl, CEO, Edmunds.com

Karen Pease, Celadon Applications

Warren Brown, Automotive Journalist, The Washington Post

Hiroko Kawai, Principal, Mobility and Vehicle Efficiency Practice, Rocky Mountain Institute

Alan Crane, Senior Program Officer, Board on Energy and Environmental Systems, National Research Council, The National Academies

26. Application of Green Chemistry in Decision-Making *(Seminar Room 2)*

The principles of green chemistry and engineering apply to several scientific disciplines, including toxicology, epidemiology, and risk assessment and related health sciences. Ideally, each discipline contributes to a green chemistry based process that leads to achieving innovation and gaining significant

environmental and economic returns; and most importantly, making wise decisions. This Breakout Session will begin with two overview presentations: a description of the American Chemical Society’s Green Chemistry Institute (ACS GCI), and a presentation on the contributions of various scientific disciplines to the development of a chemical ranking system, for use by companies and organizations seeking to reduce environmental and energy impacts and use lower-risk chemicals. The opening presentations will serve as the basis of discussion and the development of recommendations regarding how to ensure the green chemistry framework is applicable to, and benefits from the health sciences, as well as chemistry and engineering.

Organizers:

ENVIRON International Corporation
American Chemical Society (ACS): Green Chemistry Institute, and Office of Legislative and Governmental Affairs

Moderator:

Jim Solyst, Principal Consultant, ENVIRON

Discussants:

Robert Peoples, Director, ACS Green Chemistry Institute

Carole LeBlanc, Special Expert on Green Chemistry, Chemical and Material Risk Management Directorate, Office of the Deputy Under Secretary of Defense (Installations and Environment), DOD

Diane Mundt, ENVIRON

28. Green Economy Shifts in Science and Education *(Polaris B)*

Growth through accelerating resource consumption and waste generation has shifted natural systems from resource abundance and healthy regeneration to resource paucity and degradation. The New Economy accelerates resource performance and waste reduction by new applications of massive knowledge about interconnected systems (economic, social, and environmental). This session contrasts strategies (financial, business, political, education) for regenerating versus degenerating systems. It integrates innovation, whole-system pedagogy, system science and multi-sector engagement for sustainable communities as regenerative, ecobalanced systems. It explores converged-digital-media as a primary tool for managing knowledge at accelerated rates and reduced costs necessary to accelerate socioeconomic change. It identifies roadblocks and gaps to applying science and education to accelerate transformation to the New Economy and New Conservation. It offers recommendations that can trigger transformation.

Organizers:

John L. Motloch, Director, Land Design Institute; Professor of Landscape Architecture, Ball State University

J. David Armistead, Founding Partner, Social Web Strategies, LLC

Moderator:

John L. Motloch, Director, Land Design Institute; Professor of Landscape Architecture, Ball State University

Additional Discussants:

Joanne Dowdell, Senior Vice President, Director of Corporate Responsibility, Sentinel Financial Services Company

Scott Truex, Associate Professor of Urban Planning; Director, Community Based Project (CBP) Program, Ball State University

John Vann, Associate Professor of Marketing & Green Initiatives Coordinator, Ball State University

29. What is “Green Technology” – How Do We Define It? How Do We Achieve It?
(Oceanic A)

This session will examine the underlying concepts that define what we mean by “green technology” within the context of a globally sustainable economy. We shall examine how achieving this goal will require a scientifically valid basis for evaluating the costs-benefits of implementing green technologies, and whether new tools of ecological economics provide means for assessing environmentally responsible green technologies.

The following topics will be discussed: 1) overarching scientific principles that describe natural ecosystems and sustainable human-built environments; 2) lessons learned from examining energy-efficient processes and optimally dynamical systems that occur in nature, e.g., “bio-mimicry”; 3) recent innovations in the field of “green chemistry” and “green engineering”; and 4) tools and procedures for developing “selection criteria” for screening potentially green technologies.

Organizers:

A. Karim Ahmed, Director, International Program, National Council for Science and the Environment (NCSE)

Robert Nadeau, Professor, George Mason University

Moderator:

A. Karim Ahmed

Additional Discussants:

Robert Costanza, Professor and Director, Gund Institute for Ecological Economics, University of Vermont

Paul Anastas, Assistant Administrator, Office of Research and Development, Environmental Protection Agency

Julie Zimmerman, Assistant Professor and Director of the Institute of Green Chemistry and Green Engineering, Yale University

30. Recommendation to the U.S. Government: How to Build a Public-Private Partnership for a Green Economy
(Polaris C)

This breakout session focuses on the question of what the U.S. government can do through the use of national leadership and partnerships to bridge the green economy “implementation gap.” As a point of departure, we will start the session with a proposal, made available in advance, based on the recommendations contained in the most recent and comprehensive assessment, Agenda for a Sustainable America. After brief opening comments, we will conduct a facilitated and interactive participant group discussion of the proposal. The result will be a set of 8 - 12 recommendations to the Obama Administration, Congress, state and local government, business, non-profit organizations, colleges and universities and others.

Organizer/Moderator:

John C. Dernbach, Distinguished Professor of Law, Widener University

Additional Discussants:

Dianne Dillon-Ridgley, Chair, U.S. Partnership for Education for Sustainable Development

John Frece, Division Director, Development, Community, and the Environment Division, U.S. Environmental Protection Agency (invited)

Judi Greenwald, Vice President of Innovative Solutions, Pew Center on Global Climate Change

Gary Guzy, Deputy Director, White House Council on Environmental Quality (CEQ)

31. Environmental Information Needs for a Green Economy
(Continental A)

The awareness and need for environmental data has increased tremendously. More and more a diverse community of users is wholly dependent upon this information to better navigate climate change, minimizing its impact on business and personal decisions. If the U.S. is going to successfully meet this demand, it will require new information products, business approaches, and innovation. Following on the key points discussed at The Forum on Earth Observations III: The Environmental Information Revolution, this session will explore what the greatest challenges and priority actions are that must be taken to respond to climate change. Do we have the right

tools to analyze the trends in global climate change? How can the needs of such a diverse and quickly-evolving user community be identified?

Organizers:

Nancy Colleton, President, Institute for Global Environmental Strategies (IGES)

Judith Carrodeguas, International Relations Specialist, Institute for Global Environmental Strategies (IGES)

Moderator:

Nancy Colleton

Additional Discussants:

Ron Birk, Director, Aerospace Systems, Northrop Grumman

Tony Janetos, Director, Joint Global Change Research Institute

Jean Toal Eisen, Deputy Director, Office of Policy and Strategic Planning, U.S. Department of Commerce

Chris Justice, Research Director, Department of Geography, University of Maryland

John Steffenson, Federal Civilian and Global Affairs, ESRI

Steve Young, Acting Associate Director, Office of Information Analysis and Access, EPA

32. Sustainable Water Reuse for a Green Economy: Developing Policy

Recommendations (*Hemisphere A*)

Water, along with energy, is a fundamental resource for the New Green Economy. Ambitious and integrated strategies for reusing water are essential for revitalizing and sustaining local water cycles and saving substantial amounts of energy. With demand growth outpacing supplies, new decentralized, water reuse systems and water resource management are crucial ingredients for achieving environmental and economic sustainability. The session objective is to develop a focused series of recommendations to advance Sustainable Water Reuse.

Organizers:

Will Kirksey, Senior Vice President, Worrell Water Technologies, LLC

Thaddeus Graczyk, Associate Professor, Center for Water and Health, Johns Hopkins Bloomberg School of Public Health, Department of Environmental Health Sciences and Department of Molecular Microbiology and Immunology

Moderator:

Will Kirksey, Worrell Water Technologies, LLC

Additional Discussants:

James Dobrowolski, National Program Leader for Rangeland and Grassland Ecosystems and Water Security, USDA-National Institute for Food and Agriculture

David Austin, PE, Principal Technologist, CH2M Hill

Frances E. Lucy, Ph.D., Program Leader, Biomolecular Environmental Public Health Research Center, Department of Environmental Science, Institute of Technology, Sligo, Ireland

33. The Three Pillars of Sustainability: Paradigm Shifts and Opportunities for the Public and Private Sector

(*Marriott-Cannon and Hart*)

A sustainable future is the central concept behind the popular use of the word “green”. This session will review the subject of sustainability from a ‘macro-view’ perspective and will include:

1. A clarification of the definition of sustainability (and how it relates to the commonly used phrases ‘sustainable development’ or ‘sustainable growth’).
2. A review of the various methods and metrics that can be used to determine a truly sustainable condition.
3. A review of the three major ‘factors’ associated with human impact on the environment. (consumption, population, and technology).
4. A discussion about the interrelationship between biophysical limits and sustainable economics.
5. A dialogue about public policy and private sector ‘opportunities’ that will help move the world toward a more sustainable future.
6. A group discussion designed to create a ‘short list’ of suggested policy recommendations.

Organizer/Moderator:

Ed Barry, Sustainable Living Advisor to the Population Institute and Director of the Sustainable World Initiative

Additional Discussants:

Bill Ryerson, President, Population Media Center

Mathias Ruth, Roy F. Weston Chair and Director, Center for Integrative Environmental Research, University of Maryland, College Park

John Matuszak, Division Chief, Sustainable Development, US Department of State (tentative)

34. Public and Private Sustainability Policy: Is a Green Economy Sustainable and How Would One Know?

(*International Gateway*)

Will ‘green economies’ be more sustainable economically, environmentally, and socially than existing fossil fuel economies? How will we know? This session addresses these questions through discussion among participants and a panel of endowed and distinguished professors representing the Sustainable Michigan Endowed Project (SMEP) and Institute for Food and Agricultural Standards

(IFAS) at Michigan State University, TransForum International in the The Netherlands, and the Systemic Development Institute of Australia. Participants will mutually develop recommendations concerning the “what” and “how” of identifying and engaging sustainability stakeholders (business, government, civil society organizations, knowledge institutions) in the formulation of public and private policies that have potential to more closely align sciences, education and markets for new green economies with diverse and potentially conflicting stakeholder conceptions of and standards for sustainability.

Organizer:

John V. Stone, Associate Director & Senior Research Scientist, Institute for Food and Agricultural Standards, Michigan State University

Moderator:

Jan Urban-Lurain, President, Spectra Data and Research, Inc.

Additional Discussants:

Sandra S. Batie, Elliot R. Smith Chair in Food & Agricultural Policy, Department of Agricultural, Food, & Resource Economics, Michigan State University

Paul B. Thompson, W.K. Kellogg Chair in Agricultural, Food and Community Ethics, College of Agriculture and Natural Resources and Department of Philosophy, Michigan State University

H. Chris Peterson, Nowlin Chair of Consumer-Responsive Agriculture; Co-director, MSU Product Center for Agriculture and Natural Resources, Michigan State University; Board of Directors, TransForum International

Richard Bawden, Adjunct Professor, Michigan State University; Professor Emeritus, University of Western Sydney; Fellow and Director, Systemic Development Institute of Australia

36. **Development of Nontraditional Educational Systems Within Developing Countries to Create a New, Sustainable Economy** (*Seminar Room 1*)

This breakout session will facilitate discussion between representatives from various developing countries in determining how access to the most up-to-date knowledge base and most current information can be easily and cheaply provided to these countries. Through the use of the Internet, the credible, free, and easily accessible information required, can be provided to these countries to develop in a green and sustainable economy and inform students, educators, policy makers, and the public. In this session, a game

plan will be developed to provide such information through initiatives like MetaUniversity and others. Three countries from Latin America and the Caribbean (Dominican Republic, Costa Rica, and Ecuador) were chosen as starting points, with the expectation to include others in the near future.

Organizers:

Ida Kubiszewski, Managing Editor, *Solutions*
Carol Franco, Technical Assistant, National Council for Climate Change and Clean Development Mechanism (Dominican Republic)

Bernardo Aguilar, Executive Director, Fundación Neotrópica (Costa Rica)

David Batker, Co-Founder and Executive Director, Earth Economics (Ecuador)

Moderators:

Ida Kubiszewski

Carol Franco

Additional Discussants:

Robert Costanza, Director, Gund Institute for Ecological Economics; Editor-in-Chief, *Solutions*

Jon Erickson, Associate Professor, University of Vermont; Managing Director, Gund Institute for Ecological Economics

Rosa Billini, Director, International Exchange Program of the Universidad Autónoma de Santo Domingo-UASD (Dominican Republic)

38. **Opportunities and Barriers for Green Infrastructure and Buildings: The Case of Water Management** (*Classroom C*)

We will explore green building, infrastructure, and a green economy, with a focus on opportunities and barriers to adoption of sustainable planning, construction, and operation. Cross-cutting issues will be considered, with a focus on specific water examples. Panelists balance policy, research, and on-the-ground practice.

We'll explore adoption of green building and infrastructure practices, and identify strategies for investing in R&D. USGBC and Office of Science Technology Policy Recommendations will be examined, along with roles and opportunities for public, private and academic sector investments. Regional variations in sustainable green building and infrastructure needs will also be considered. Participants will craft priority recommendations to the Administration including beneficial partnerships to effectively leverage public dollars to meet pressing national needs.

Organizers:

Dale Manty, National Center for Environmental Research, U.S. EPA ORD

Chris Pyke, Director of Research, U.S. Green Building Council

Moderator:

Corey Buffo, Residential Environments
Program, U.S. DOE

Additional Discussants:

Paul Domich, Executive Secretary, White House
Office of Science & Technology Policy,
Subcommittee on Buildings Technology
Research & Development Subcommittee

Stewart Schwartz, Principal Investigator,
University of Maryland Baltimore City, Center
for Urban Environmental Research and
Education

Daniel Yeh, Principal Investigator, Civil and
Environmental Engineering, University of South
Florida

Tom Puttman, TSSI, City of Portland

Annie Pearce, Principal Investigator, School of
Architecture, Virginia Tech

Rob Roseen, Principal Investigator, Stormwater
Research Center, University of New Hampshire

Friday, January 22, 2010

Detailed Agenda

Note: Sessions Located in Atrium Hall Unless Otherwise Noted

- 8:00 am **Continental Breakfast**, Poster Session and Exhibition continue
Images by Gary Braasch © 2010 World View of Global Warming
Conference Highlights, Green Economy TV by WebsEdge
- 8:45 am **Moderated Roundtable: The New Green Economy: Moving from Theory to Action**
- Moderator: **Ray Suarez**, Senior Correspondent, The NewsHour
 - **Len Peters**, Cabinet Secretary, Energy and Environment, State of Kentucky
 - **Victor Abate**, Vice President, GE Renewables
- 10:15 am - **Symposia I (concurrent sessions)**
11:45 am **Global Green Economy**
01. UNEP Green Economy Report – Findings and Recommendations for a Transition to a Green Economy (*Horizon B*)
- Steady-State Macroeconomy**
02. Counterpoint: The Limits of Markets to Achieve Sustainability: The Dangerous Illusion of Endless Growth (*Meridian D&E*)
- Investment**
03. Investments for a New Green Economy (*Oceanic A*)
- Climate**
04. Report from the Copenhagen Climate Negotiations (*Hemisphere A*)
- States**
05. Movement Toward a “Sustainable Economy” in Minnesota and Vermont: How Impacting, How Lasting, How Transferable? (*Continental C*)
- Communities**
06. How Equitable Growth Supports the New Green Economy (*Polaris C*)
30. Funding Strategies for Green Community & Regional Development: Achieving Rapid, Resilient Renewal of the Natural, Built, & Socioeconomic Environments (*Continental A*)
- Business**
07. Greening of Products and Operations: The Business Perspective (*Polaris B*)
08. Not Business as Usual: Driving Change in the New Green Economy (*Polaris A*)
- Jobs – Labor/Partnerships**
09. Blue + Green = Success (*International Gateway*)
- Ecosystem Services**
10. Ecosystem Services (*Hemisphere B*)
- Green Buildings and Infrastructure**
11. Green Building, Green Jobs (*Horizon A*)
12. Green Infrastructure, Transportation, Energy and Transatlantic Learning (*MD Classroom 1*)
- Energy - Renewables**
13. A Renewable Energy Future: Can We Get from Here to There? *or* How Many Technologies Does it Take to Change a Light Bulb? (*Continental B*)
14. Ensuring a Green Recovery: Biomass Certification Schemes from Both Sides of the Atlantic (*Oceanic B*)
- 11:45 am **Buffet Lunch, Youth and Student Mentoring Tables**- Mentoring tables open for participants interested in speaking and interacting with the youth and students at the conference.
Lunch sponsored by Solutions in celebration of the launch of the new publication, Solutions Island Press Book Signings (Mezzanine Atrium Hall):

- **David Blockstein and Leo Wiegman**, authors of *The Science Solutions Consensus*
- **Elizabeth Grossman**, author of *Chasing Molecules: Poisonous Products, Human Health, and the Promise of Green Chemistry*
- **Rob Young**, co-author of *The Rising Sea*
- **Christopher Leinberger**, author of *The Option of Urbanism: Investing in a New American Dream*
- **Gregory Kats**, author of *Greening Our Built Worlds: Costs, Benefits, and Strategies*
- **Frank Ackerman**, author of *Poisoned for Pennies: The Economics of Toxics and Precaution*
- **Jay Inslee**, co-author of *Apollo's Fire: Igniting America's Clean Energy Economy* (invited)

1:15 pm

Symposia II (concurrent sessions)

2:45 pm

Economics

15. Technological Progress Toward a Green Economy: Innovation, Expectation and Precaution (*Continental C*)

Green Jobs

16. Federal Family Grows Green Jobs (*Oceanic A*)

Energy

17. Low Emissions Fuel Technologies – The Bridge to the Green Future (*Oceanic B*)
 18. Green Grid Success Stories (*Polaris A*)

Education

19. Educating for a Green Economy (*Hemisphere B*)

Communities

20. Rethinking City Economics: How Green Infrastructure and Deconstruction Can Provide Green Jobs, Revitalize Communities, and Encourage Local Self-Reliance (*Continental B*)
 21. Local and Regional-Scale Blueprints for a Green Economy (*International Gateway*)

Business

22. Moving to Future States: From Today to Green and Beyond (*Polaris B*)

Climate

25. Climate Security in Age of Uncertainty (*Hemisphere A*)

Agriculture

26. Rural Economy and Agriculture: The Green Path to Prosperity (*Horizon B*)

Innovation

27. Local and Regional Innovation Processes in the Green Economy: Experiences from Sweden and Silicon Valley (*Polaris C*)

Ecosystem Services

28. Green Forests, Greener Revenues: Tools for Forest Carbon and Other Ecosystem Services (*Meridian D&E*)

Toxics

29. Understanding and Solving Our Toxic Predicament: Greening the Chemical Industry (*Horizon A*)

3:15 pm

Closing Discussion: Progress of the Obama Administration in Moving Toward a Green Economy

- **Damon Silvers**, General Council, AFL-CIO; Deputy Chair, Congressional Oversight Panel of TARP
- **Jessy Tolkan**, Executive Director, Energy Action Coalition
- **Gary Hirshberg**, President and CEO, Stonyfield Farm, Inc.
- **Cecelia Rouse**, Member of President's Council of Economic Advisors

4:30 pm

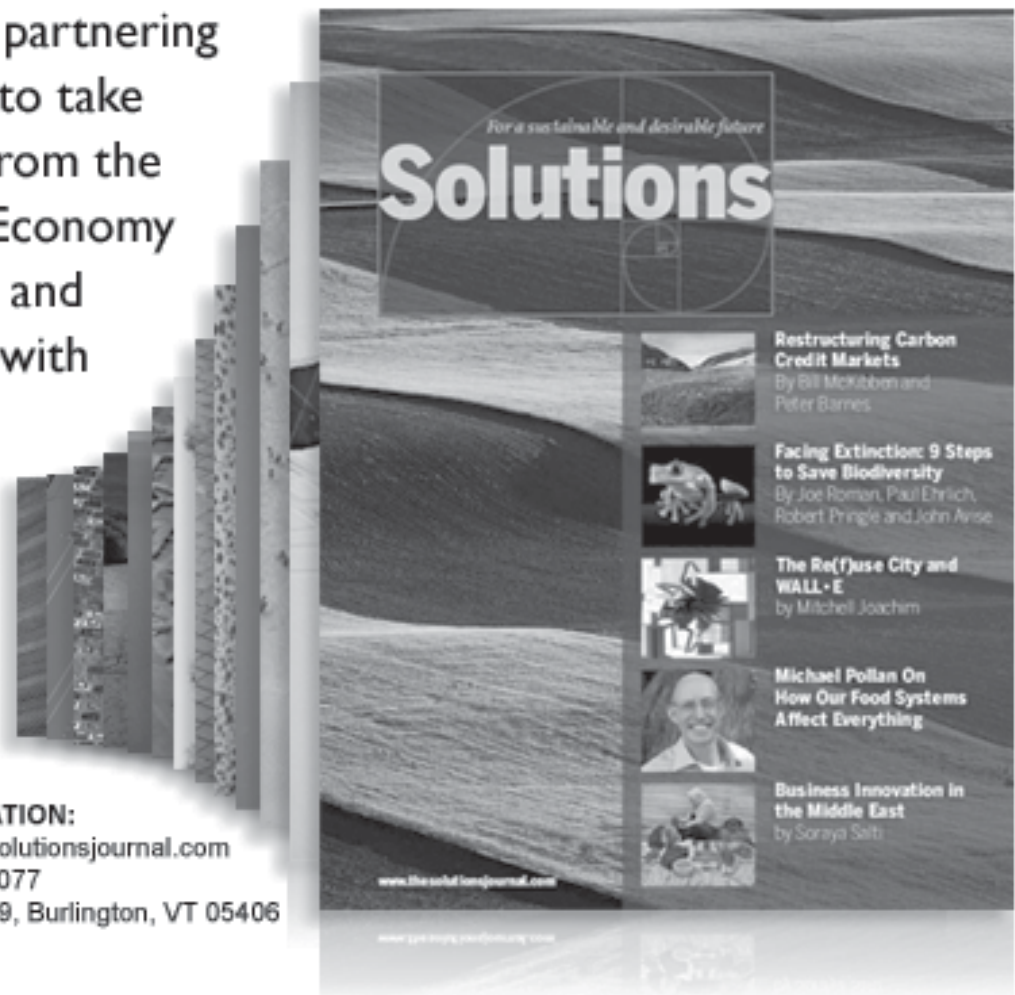
Adjourn – Closing Remarks: Ambassador Richard Benedick, President, NCSE

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Solutions

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Generation Green: Youth Voices and Visions

YOUTH WRITING CONTEST WINNERS:

Category: High School

Vadim Brutskiy - Encina Preparatory High School - *Green Washing - My Take on It*
Kristen Powers - Chapel Hill High School - *The Over-Looked Student*
Derek Siegel - Towson High School - *We're Not Apathetic, Just Bored*

Category: University

Emily Grubert - The University of Texas at Austin - *Beat a Dead Horse or Breed Immortal Ones*
Alyssa Pandolfi - Northeastern University - *Sustainability: Sacrifice or Reality?*
Swift Otter - College of Menominee Nation - *An Indigenous Perspective on the Green Economy*
Stephanie Hardjo - University of Indonesia - *Greening Through Education*
Emily Goldstein - University of Louisville - *Inspiring Change Through Passion and Awareness*
Carrie Ross, University of Georgia – *Sustainability Through Natural Renewable Energy Solutions*
Annie Condon, University of Michigan – *Hot Dogs*
Amanda Boccuti, University of Mary Washington – *Resurrecting the Electric Car*

Generation Green is sponsored by the generous support of the Betsy and Jesse Fink Foundation



Friday Plenary Biographies

Roundtable: The New Green Economy: Moving from Theory to Action

Ray Suarez joined The NewsHour in October 1999 as a Washington-based Senior Correspondent after hosting NPR's "Talk of the Nation" for six years. Prior to that, he covered stories for the NBC-owned station, WMAQ-TV in Chicago, and was a Los Angeles correspondent for CNN, a producer for the ABC Radio Network in New York, a reporter for CBS Radio in Rome, and a reporter for various American and British news services in London. Suarez has narrated, anchored or reported many documentaries for public radio and television and currently hosts the monthly foreign affairs program America Abroad, as well as Destination Casa Blanca for HITN-TV. Suarez authored "The Holy Vote: The Politics of Faith in America," winner of the 2007 Latino Book Award for Best Religion Book. He was a co-recipient of two DuPont-Columbia Silver Baton Awards, as well as the 1996 Ruben Salazar Award and the 2005 Distinguished Policy Leadership Award. Suarez has been awarded honorary doctorates, most recently by Lewis and Clark College in Oregon and is winner of the Benton Fellowship in Broadcast Journalism at the University of Chicago. He has also been honored with a Distinguished Alumnus Award from NYU, and a Professional Achievement Award from the University of Chicago.

Victor Abate is vice president of GE Energy's Renewables business, a leading global provider of wind and solar energy products and support services. Prior to his current role, Mr. Abate was vice president of technology for GE Energy's power-generation segment, which includes gas, steam, wind, solar and hydro-turbine generators, gasification technologies and integrated gasification combined cycle. Mr. Abate began his GE career in 1990 and has held several management roles in engineering, services, production and quality. In 1996, he led the large turbine generator business as the quality leader and was soon appointed general manager of generator technology. In 1999, Mr. Abate assumed responsibility in leading the gas turbine volume ramp up in GE's power generation segment and in late 2000, he was appointed general manager of steam turbine technology. Mr. Abate became an officer of GE in 2003. Prior to joining GE, Mr. Abate worked for Allied Signal and Zurn Industries and was responsible for mechanical drive technology and new product development. Originally from Williamstown, Massachusetts, Mr. Abate holds bachelor's and master's degrees in mechanical engineering from Rensselaer Polytechnic Institute and Union College respectively, he also holds an M.B.A. from Rensselaer Polytechnic Institute.

Leonard Peters is Secretary of the Energy and Environment Cabinet for the State of Kentucky. Governor Steve Beshear's choice to oversee Kentucky's energy and environmental protection program is an internationally renowned chemical engineer with demonstrated leadership in research, academia, and management. Dr. Leonard Peters served for the past five years with Battelle Memorial Institute, a leading non-profit applied science and technology development company. During his tenure at Battelle, Dr. Peters was senior vice president and director of the Pacific Northwest National Laboratory, where he oversaw a staff of 4,200. Under his leadership, he realigned the laboratory's research priorities to meet the needs of its diverse customer base. Dr. Peters has held senior academic and administrative positions at leading universities, including Virginia Tech and the University of Kentucky. He holds a doctorate in chemical engineering from the University of Pittsburgh and is a prolific author and lecturer. Dr. Peters has been recognized for his achievements with honors ranging from the National Science Foundation Award to the Oak Ridge Associated Universities' Outstanding Leadership Award.

Roundtable: Closing Discussion: Progress of the Obama Administration in Moving Toward a Green Economy

Damon A. Silvers holds the title of Director of Policy and Special Counsel for the AFL-CIO and is Deputy Chair of the Congressional Oversight Panel for TARP. He is a member of the Securities and Exchange Commission's Investor Advisory Committee, the United States Treasury Department Investor's Practice Committee of the President's Working Group on Financial Markets, and member of the Public Company Accounting Oversight Board's Standing Advisory Group and Investor Advisory Group. Prior to working for the AFL-CIO, Silvers was a law clerk at the Delaware Court of Chancery for Chancellor William T. Allen and Vice-Chancellor Bernard Balick. Silvers received his J.D. from Harvard Law School, his M.B.A. from Harvard Business School and is a Baker Scholar. He is the primary author of "A Response to Vice-Chancellor Leo Strine Jr.'s, Toward Common Sense and Common Ground? Reflections on the Shared Interests of Managers and Labor in a More Rational System of Corporate Governance," published in *The Journal of Corporation Law* (2007) and "The Current State of Auditing as a Profession: A View from Worker-Owners," published in *Accounting Horizons* (2007). He is also the author of "Securities and Exchange Commission: Restoring the Capital Markets Regulator and Responding to Crisis," published in *Change for America: A Progressive Blueprint for the 44th President* (2008).

Jessy Tolkan serves as the Executive Director for the Energy Action Coalition, a coalition of 50 leading youth organizations dedicated to clean energy throughout the U.S. and Canada. Prior to her work at the Energy Action Coalition, Tolkan worked with leading advocacy and grassroots organizations including: United States Student Association, Young Democrats of America, and Grassroots Campaigns, Inc. Tolkan received a B.A. from the University of Wisconsin-Madison in Political Science and African America-Studies. She was the state director for the New Voters Project, helping to register more than 130,000 young voters and produce one of the highest youth turnout rates in the country. In 2007, she helped organize the Power Shift Conference, the largest youth gathering on global warming in our nation's history and the largest single lobby day on Capitol Hill focused on global warming. Most recently, Jessy spearheaded POWER VOTE, a campaign to mobilize 1,000,000 young voters on climate and energy issues in more than 30 states across the country. She's been featured in *Time Magazine*, *Hard Ball* with Chris Matthews, and *Vanity Fair Magazine*, and in 2006, Tolkan was named one of the REAL HOT 100 Women in America.

Gary Hirshberg is co-founder, President, and Chief Executive Officer of Stonyfield Farm, founded in 1983 to become the world's largest producer of organic yogurt. Like many of his generation, Hirshberg—who graduated from high school in the early 1970s—was a product of the counterculture era. Hirshberg spent much of the 1970s pursuing his interest in ecology and the environment. He learned how to build windmills, harnessing wind power for energy, and worked as an environmental education specialist for the U.S. government. For a time, he even ran environmental tours in China. By the early 1980s, he was the executive director of the New Alchemy Institute, a nonprofit research center in Cape Cod, Massachusetts, that published studies on organic farming, aquaculture, and renewable energy sources. He also became involved in a New Hampshire scheme called the Rural Education Center, founded by former aerospace engineer Samuel Kaymen as an organic farming school. Hirshberg is active in various organizations aimed at increasing consumer awareness for the environment and socially responsible business models, such as the Social Venture Network and Stonyfield's generous Profits for the Planet program, which donates ten percent of the company's profits to environmental organizations. Hirshberg is also a founding partner of O'Naturals, a chain of fast food restaurants in New England that serves fresh, organic fare.

Cecilia Rouse was appointed by President Obama as one of three members of the Council of Economic Advisers, an agency within the Executive Office of the President, that offers the President objective economic advice on the formulation of both domestic and international economic policy. Dr. Rouse is currently on leave from Princeton University, where she is the Theodore A. Wells '29 Professor of Economics and Public Affairs. She received her Ph.D in economics from Harvard University.



SYMPOSIUM

Friday, January 22, 2010: Sets I and II

Symposia I from 10:15 am to 11:45 am

01. **UNEP Green Economy Report – Findings and Recommendations for a Transition to a Green Economy** (*Horizon B*)

Challenges facing the world today in the form of food, fuel and financial crisis are also unique opportunities for a reform of the world economy to refocus investment in green sectors, which would contribute to more sustainable economic growth and job creation. UNEP, with a wide range of international and national partners is currently developing a Green Economy Report, which aims to make a case for investments in sectors with high potential in contributing to a green economy such as cities, transport, waste, water, fisheries, buildings renewable energy, agriculture and forests. The Report will explain core principles of a green economy, and, based on economic analysis, aims to generate and communicate evidence on how investment in green sectors contributes economic growth, decent jobs creation, and poverty reduction. Key messages are targeted towards governments, business, and all those with a capacity to invest (shareholders etc.). By January 2010, intermediate findings of the report will be available, which will provide the basis for the presentation and discussion at the NCSE Conference.

Organizer/Moderator:

Pavan Sukhdev, Project Leader, UNEP Green Economy Initiative

Additional Discussants:

William Becker, Executive Director, Presidential Climate Action Project

Melinda Kimble, Senior Vice President, UN Foundation

Edward Barbier, Professor of Economics, University of Wyoming; principal author of the 2009 UNEP report, *A Global Green New Deal*

02. **Counterpoint: The Limits of Markets to Achieve Sustainability: The Dangerous Illusion of Endless Growth** (*Meridian D&E*)

Modern economic theory and practice are founded on assumptions that ignore the findings of environmental science, and pose dangers, rather than protections, for living systems. This symposium examines such assumptions and ecological economics alternatives, including:

- Economic growth is able to continue indefinitely versus an alternative model of economic health based on conceptions of human well-being beyond material consumption and of ecosystemic integrity and value to all life.
- Discounting of future effects of current economic behavior.
- Conventional (material) notions of aggregate net benefit across a human population ignore fairness, and practically undermine the human benefit they seek by ignoring environmental consequences and constraints.
- Market incentives will spur technological innovations that will allow us to bypass environmental limits and ecological constraints.

Organizers:

Paul G. Heltne, Independent Scholar

George Rabb, Board of Directors, Center for Humans and Nature

Moderator:

George Rabb, Center for Humans and Nature

Additional Discussants:

Peter G. Brown, Senior Fellow, Center for Humans and Nature; Professor, School of the Environment, Geography, and Natural Resource Sciences, McGill University

Peter A. Victor, Professor in Environmental Studies, York University

John Fullerton, Entrepreneur, Level 3 Capital Advisors

Commentators:

James Gustave Speth, Dean Emeritus, Yale School of Forestry and Environmental Studies, Yale University; Board of Directors, Center for Humans and Nature

Paul G. Heltne, Independent Scholar

03. Investments for a New Green Economy

(Oceanic A)

We will have a lively discussion about the individual and combined effects of our new energy policies in the near term. What is the combined impact of the Obama administration's diverse energy interventions and initiatives? Will there be an energy supply gap? Are current policies enough to stimulate the technological and financial innovation that we'll need? Who will the winners and losers be? Where will the job growth be? Will the new polarity of winners and losers itself change the course of how the US tackles energy and climate issues? Does the public have more tolerance for change than politicians realize, and are we under-reaching? Finally, we will examine the opportunities and challenges the new policy dynamic has on entrepreneurs. How can innovators best compete in this new landscape?

Organizer:

Jeffrey Leonard, President and CEO, Global Environment Fund

Elizabeth Lewis, Global Environment Fund

Additional Discussants:

Lauren Bigelow, New Energy Finance

Philip Bane, Global Smart Energy

Kirk Hourdajian, Project Manager, Corporate Partnerships, Environmental Defense Fund

04. Report from the Copenhagen Climate Negotiations *(Hemisphere A)*

The Kyoto Protocol on climate change expires in 2012. From Dec. 7-18, 2009, the world's governments convened in Copenhagen, Denmark to create a new global climate agreement to reduce greenhouse gas emissions at the United Nations Climate Change Conference. This symposium will be one of the first events to report on this 15th conference of parties (COP-15) under the UN Framework Convention on Climate Change (UNFCCC).

The symposium will feature members of the US government negotiating team, nongovernmental organizations and Congressional staff involved in the conference. Speakers will not be finalized until after the Copenhagen conference.

Organizers:

Rob Bradley, World Resources Institute

Jennifer Layke, Johnson Controls, Inc.

05. Movement Toward a “Sustainable Economy” in Minnesota: How Impacting, How Lasting, How Transferable?

(Continental C)

The new “green” economy will be built from the bottom up. It is critical that these initiatives succeed. They must learn from each others’ successes and failures so that overall progress will accelerate. Good transferable examples are a highly effective step in achieving more widely accepted green practices and institutions. Description of Vermont and Minnesota initiatives toward a more sustainable economy. What are the barriers and obstacles to creating a more sustainable economy at a regional level? What are the actions being taken to overcome these barriers? How successful have they been? What are the larger lessons?

Organizer and Moderator:

Alfred Marcus, Spencer Chair in Strategy and Technological Leadership, University of Minnesota Carlson School of Management

Additional Discussants:

Dave Miel, Electrical Engineer, Forbes Miel

Myron Dowell, Partner with Advanced Policies and Strategies

S. Massoud Amin, Honeywell/H.W. Sweatt Chair in Technological Leadership and Professor of Electrical and Computer Engineering, University of Minnesota

06. How Equitable Growth Supports the New Green Economy *(Polaris C)*

The Obama Administration has set goals for transparency which include connecting with those who have been underrepresented in environmental decision making. Historically, people of color and low-income communities have been locked out of local and regional decision-making processes. In the case of community planning, the consequence has been planning policy and practice that, at times, has hindered the well-being of underserved populations and vulnerable groups. As the United States takes steps to green its economy, it has an opportunity to demonstrate that the objectives of economic development, environmental protection, and meeting the needs of underserved populations are not mutually exclusive. This session features leaders who are encouraging equitable development by producing renewable energy; constructing green buildings; and providing citizens with convenient access to open space.

Organizer/Moderator:

Carlton Eley, Environmental Protection Specialist, U.S. Environmental Protection Agency

Additional Discussants:

Carlton Brown, COO, Full Spectrum

Robert Garcia, Executive Director and Founder, City Project in Los Angeles, CA

Bob Gough, Secretary, Intertribal Council on Utility Policy

30. **Funding Strategies for Green Community & Regional Development: Achieving Rapid, Resilient Renewal of the Natural, Built & Socioeconomic Environments**

(MD Classroom C1)

Storm Cunningham and David Rouse present leading-edge strategies for designing, funding, and perpetuating community revitalization that simultaneously achieves sustainability and climate change goals. They reveal new funding sources, and highly-effective tools enabling communities to attract significant private investment. Storm Cunningham is CEO of **Resolution Fund, LLC** of Washington, DC, which provides revitalization training and resources to communities worldwide, primarily through the **Places To Invest** initiative. He is author of *The Restoration Economy* (Berrett-Koehler, 2002) and *reWealth* (McGraw-Hill, 2008). David Rouse is a principal with **Wallace Roberts & Todd (WRT)**, a planning and design consulting firm with seven offices across the U.S. David's work has won many awards, including the APA's Daniel H. Burnham Award and its predecessor, the Outstanding Planning Award for a Plan.

Organizers & Discussants:

Storm Cunningham, CEO, Resolution Fund, LLC

David Rouse, Principal, Wallace Roberts & Todd (WRT Planning & Design)

07. **Greening of Products and Operations: The Business Perspective** *(Polaris B)*

With the changing regulatory landscape, customer demands and investor pressures, are American companies finally recognizing the business opportunities of being green? How did the recession impact "green" initiatives?

This symposium will present key findings from the fourth biennial State of the Corporate Citizenship survey in the U.S. where CEOs and senior executives provided insights into the sustainability practices of American companies. The session will include discussants from the business sector who will share their perspectives, success stories and suggestions for advancing the green economy.

Key issues to be explored include:

- What companies see as the solution to the current economic crisis and creating a more stable American economy going forward?
- What are the key drivers for greater environmental and social responsibility?

Organizer/Moderator:

Vesela Veleva, Research Manager, Boston College Center for Corporate Citizenship

Additional Discussants:

Mark G. Popovich, Senior Program Officer, The Hitachi Foundation

Chris Lloyd, Executive Director of Public Policy and Corporate Responsibility, Verizon

Lynnette McIntire, Director of Corporate Reputation Management, UPS

08. **Not Business as Usual: Driving Change in the New Green Economy** *(Polaris A)*

The business case for "going green" is becoming more compelling. Companies can play a central role in advancing a new green economy through their own actions and driving change in both their supplier chains and customer base. This session provides an opportunity to hear from leading companies advancing their sustainability strategies, their successes and opportunities for innovation, as well as the challenges ahead.

Organizer:

Shelley Kossak, National Council for Science and the Environment

Moderator:

Antje Danielson, Co-Founder, Zipcar, and Program Manager, Tufts University Institute of the Environment

Additional Discussants:

Dawn Rittenhouse, Director of Sustainability, DuPont

Jeff Seabright, Vice President for Environment and Water Resources, The Coca-Cola Company

Candace Taylor, Director of Corporate Strategy and Sustainability, Wal-mart

Lorrie Vogel, General Manager, Nike Considered

09. **Blue + Green = Success**

(International Gateway)

Both working people and environmentalist have a stake in building the new green economy. Transforming our economy through renewable energy, energy efficiency, mass transit and rail, a new smart grid and other solutions to global warming, has the potential to create millions of jobs while reducing

global warming emissions and moving Americans toward energy independence.

Launched in 2006 by the United Steelworkers and the Sierra Club, this unique labor-environmental collaboration has grown to include the Communications Workers of America (CWA), Natural Resources Defense Council (NRDC), Service Employees International Union (SEIU), Laborers' International Union of North America (LIUNA), Utility Workers Union of America (UWUA), American Federation of Teachers (AFT), and the Amalgamated Transit Union (ATU). The Blue Green Alliance unites over eight million people in pursuit of good jobs, a clean environment and a green economy.

Organizer:

Margrete Strand Rangnes, Deputy Director, Blue Green Alliance

Additional Discussants:

Yvette Pena Lopes, Director of Legislation and Intergovernmental Affairs, Blue Green Alliance

Roxanne D. Brown, Assistant Legislative Director, United Steelworkers (USW)

Steward Acuff, Utility Workers Union of America (UWUA)

10. Ecosystem Services

(Hemisphere B)

Organizers:

Carl Shapiro, Senior Advisor for Science, Decisions and Policy, U.S. Geological Survey

Malka Pattison, U.S. Department of the Interior

Moderator:

Carl Shapiro

Additional Discussants:

Jim Boyd, Senior Fellow, Resources for the Future

Robert Costanza, Gordon and Lulie Gund Professor of Ecological Economics and Director, Gund Institute for Ecological Economics, University of Vermont

Sarah Lynch, Director, Agriculture, World Wildlife Fund

Mark Nechodom, Deputy Director, U.S. Department of Agriculture Office of Ecosystem Services and Markets

Ben Simon, Acting Director, Department of the Interior Office of Policy Analysis

Amanda Desantis, Project Director, DuPont

11. Green Building, Green Jobs (Horizon A)

According to President Obama's plan to create green jobs, billions of dollars will be set aside to retrain

workers for jobs in clean energy and other green-collar fields.

A critical component of any strategy for creating green jobs in the building sector is the re-use and adaptation of existing resources—capturing and reusing the embodied energy in existing buildings, curbing sprawl, and protecting and enhancing open spaces.

This symposium will bring together experts from the financial, real estate, architecture, planning, and policy worlds to present theories, best practices, and examples on navigating the sometimes daunting waters to create a future that is environmentally, financially, and socially sound. The symposium will focus on the potential for sustainable development to create green jobs.

Organizer:

Kate Graves, Program Director, Island Press

Moderator:

Rebecca Flora, Senior Vice President, Education & Research, U.S. Green Building Council

Additional Discussants:

Gregory Kats, Managing Director, Good Energies

Jair Lynch, Founder, Jair Lynch Development Partners

Chris Leinberger, Visiting Fellow at the Brookings Institution, Founding Partner of the Arcadia Land Company, President of LOCUS

12. Green Infrastructure, Transportation, Energy and Transatlantic Learning

(MD Classroom C1)

Northern Europe has heavily invested in sustainable development; from this pool of experiences, there are lessons that the US can draw from in the development of a new green economy. This symposium focuses on European success stories and political challenges in the areas of green infrastructure, transportation, and energy.

Specifically, we will look at the role of planning and public policy in incentivizing the green construction industry, land-use and land transportation strategies, green taxation and promotion of renewable energy through feed-in tariffs. We discuss the potential of and barriers to US application of these European experiences in creating a new green economy and the necessary role of science in sustainable environmental solutions.

Organizer/Moderator:

Melissa Keeley, Assistant Professor, The George Washington University

Additional Discussants:

Ralph Buehler, Assistant Professor, Virginia Tech University

Michael Mehling, President, Ecologic Institute

Klaus Linsenmeier, Executive Director, Henrich Boell Foundation

13. **A Renewable Energy Future: Can We Get from Here to There? or How Many Technologies Does it Take to Change a Light Bulb? (Continental B)**

A green economy will not happen without a significant portion of our energy needs being met by renewable energy. There are many hurdles in the way of renewables – from technological issues, to institutional roadblocks to policy disincentives.

There are many technological hurdles still to overcome. Costs are still an issue for most technologies, intermittency and storage concerns have hindered increased penetration of some renewables, and the use of resources has certainly impacted biofuels technologies. Institutional barriers are a prevalent problem to increased penetration of renewables as well. Finally, a complicated mix of regulations, taxes and incentives, that are not always consistent across objectives, characterizes our energy policy.

This panel will discuss how we can get to a renewable future, discussing the technical, economic, institutional and policy opportunities that will lead to a future that is primarily based on renewables.

Organizer/Moderator:

Mark Bernstein, Managing Director, University of Southern California Energy Institute

Additional Discussants:

Marc L. Ulrich., Vice President of Renewable and Alternative Power, Southern California Edison

Jigar Shah, CEO, The Carbon War Room

Jacques Beaudry-Losique, Deputy Assistant Secretary, Energy, Efficiency & Renewable Energy, US Department of Energy

Bobi Garrett, Senior Vice President for Outreach, Planning & Analysis, National Renewable Energy Lab, US Department of Energy

14. **Ensuring a Green Recovery: Biomass Certification Schemes from Both Sides of the Atlantic (Oceanic B)**

Bio-energy has been identified as an integral part of the renewable energy mix that is to lead us to a low-carbon economy. However, a mechanism is needed to ensure that measures being implemented for bio-energy actually lead to a low-carbon path and, at the same time, take into account conflicting goals of economic prosperity, environmental preservation and social welfare. This symposium will address the certification process as an example of such a mechanism and focus on its application to bio-energy production. Policymakers from California, Argentina and Germany will discuss their experiences in developing sustainability standards for bio-energy generation and experts from academia will shed light on the global and technical aspects of certification as well as its applicability to other natural resource-based products.

Organizer:

Mandy Ma, Transatlantic Fellow, Ecologic Institute – Berlin

Moderator:

Stephanie Schlegel, Fellow and Coordinator of Agriculture and Bioenergy Division, Ecologic Institute – Berlin

Additional Discussants:

A. G. Kawamura, Secretary, California Department of Food and Agriculture

Benjamin Cashore, Professor, School of Forestry and Environmental Studies, Yale University

Jessica Loehndorf, Fellow, Ecologic Institute on behalf of the German Ministry for the Environment

Lucia Muñoz, Argentina Representative, International Sustainability and Carbon Certification, Meó Consulting

* Session sponsored by the **Bellagio Forum for Sustainable Development (BFSD)**, an international network of grant-providing institutions striving to attain environmental balance, economic stability and social progress. www.bellagio-forum.org

Symposia II from 1:15 pm to 2:45 pm

15. **Technological Progress Toward a Green Economy: Innovation, Expectation and Precaution** (*Continental C*)

The hope for greening an economy while it grows hinges on technological progress. Therefore, the prospects for technological progress to reconcile economic growth with environmental protection should be rigorously analyzed to avoid mistakes resulting from misgauging those prospects. In this symposium, key trends in technology will be described in relation to environmental concerns. These and other technological trends induce expectations for economic growth, and these expectations are often manifest in public policy. These expectations and policy manifestations will be explored and discussed. Finally, an often overlooked aspect of technological progress is its relationship with economic growth at pre-existing levels of technology. This relationship will be described and the implications for economic growth, the environment, and science and technology policy will be discussed.

Organizer/Moderator:

Brian Czech, President, Center for the Advancement of the Steady State Economy

Additional Discussants:

David Rejeski, Director, Science and Technology Innovation Program, Woodrow Wilson International Center for Scholars

Kevin Hurst, Assistant Director for Energy Technology, White House Office of Science and Technology Policy

16. **Federal Family Grows Green Jobs** (*Oceanic A*)

Federal Government agencies are collaborating to an unprecedented extent. Building on an earlier interagency technology network, EPA convened several agencies to more effectively develop green jobs programs. The Department of Labor supported this work and also helped fund a multimedia 'Community of Practice' portal for government and non-government green jobs program manager. Following staff and management level efforts the Presidents' Council on Environmental Quality (CEQ) convened more than a dozen agencies to accelerate the creation of green jobs.

Organizer:

Leanne Nurse, Program Analyst, U.S. EPA

Moderator:

David Widawsky, Acting Director, U.S. EPA National Center for Environmental Innovation

Additional Discussants:

Charles Cox, Green Jobs Community Manager, Department of Labor Employment and Training Administration

Michelle Fox, Department of Energy's Office of Energy Efficiency and Renewable Energy

17. **Low Emissions Fuel Technologies – The Bridge to the Green Future** (*Oceanic B*)

Our focus is on the expectation that fossil fuels will be dominant until 2050 especially in the rapidly developing world. Providing for our world's energy needs is one of the great challenges. However, it is accompanied by a need for reduced pollution and greenhouse gas emissions. The link between energy and the environment presents a difficult paradox in the development debate. Energy is vital to economic development. At the same time, energy, especially through the combustion of fossil fuels contributes to adverse environmental effects such as air pollution and global climate change. So how does one work toward low-emissions technologies that permit "sustainable" use of fossil fuels? The focus of the session is on energy that is NOT green, but should be made green.

Organizer/Moderator:

Timothy R. Carr, Marshall Miller Professor, Department of Geology/Geography, West Virginia University

Additional Discussants:

Sarah Forbes, Senior Associate, World Resources Institute

David L. Pumphrey, Deputy Director & Senior Fellow for Energy & National Security, Center for Strategic and International Studies (CSIS)

Carey W. King, Research Associate, Jackson School of Geosciences, University of Texas, Center for International Energy & Environmental Policy

Allyson Anderson, Permanent Staff, U.S. Senate Committee on Energy and Natural Resources

18. **Green Grid Success Stories** (*Polaris A*)

An improved energy infrastructure isn't something for the future; it's happening right now. The speakers here all are pioneers in bringing energy services and energy devices to the market. Their innovations help save energy and in most cases lead to higher profits. Topics include the identification of wasted energy in factories and the installation of equipment that can convert waste heat into usable electricity; efficiency

conversions of large auto and truck fleets; and the modernization of the grid itself, making it more robust against blackouts, congestion, and terrorism.

Organizer/Moderator:

Phillip F. Schewe, Chief Science Writer, American Institute of Physics; author of “The Grid, a history of the electrical network in the U.S.”

Additional Discussants:

Thomas Casten, Chairman, Recycled Energy Development

S. Massoud Amin, Director of the Technological Leadership Institute, University of Minnesota

Katherine Hamilton, President, GridWise Alliance

19. Educating for a Green Economy

(Hemisphere B)

Our panel will demonstrate why green schools offer an exceptional environmental, educational, and economic approach to improving the overall health and quality of America’s schools. Typically, green schools incorporate energy-efficiency, sustainability education, healthy food, and enhanced recreation/outdoor education opportunities, among other opportunities. Such attributes have been shown to directly increase teacher retention and student attendance rates, improve test scores, reduce social inequity, and provide an educationally rich setting. Speakers will discuss the details of green school design, policies that promote sustainability education, as well as the benefits of healthy food promotion. We will open our panel with a preview of a new PBS documentary, *Growing Greener Schools*, on the myriad benefits and potential of green schools.

Organizer/Moderator:

Sean Miller, Director of Education, Earth Day Network

Additional Discussants:

Harry Wiland, Executive Producer, Director, Co-President and Co-CEO, Media Policy Center Foundation

Jim Elder, Campaign Director, Campaign for Environmental Literacy

Greg Kats, Senior Director and Director for Climate Change Policy, Good Energies

Tony Geraci, Director of Food and Nutrition Services, Baltimore City Public Schools

20. Rethinking City Economics: How Green Infrastructure and Deconstruction Can Provide Green Jobs, Revitalize Communities, and Encourage Local Self-Reliance *(Continental B)*

The purpose of this symposium is to demonstrate how a new community based economic framework can be established by providing unskilled workers with living wage green jobs through the utilization of green infrastructure, deconstruction, and other methods of resource recovery. Unlike other models for the creation of green jobs, our theory looks at green jobs and green infrastructure at a community-wide level. Rather than establishing isolated, environmentally-friendly jobs, our model illustrates how our communities can be transformed and made more self-reliant. Not only do the jobs created by such a model provide employment for an unskilled workforce, however they also allow for stormwater management, urban farming and self-sufficiency.

Organizer:

Samuel H. Sage, President, Atlantic States Legal Foundation

Additional Discussants:

Neil Seldman, President, Institute for Local Self-Reliance

Jean Kessner, Counselor at Large, Onondaga County, NY

Alexander Shisler, Green Infrastructure Coordinator, Atlantic States Legal Foundation

21. Local and Regional-Scale Blueprints for a Green Economy *(International Gateway)*

This symposium features three strategic approaches for local and regional-scale planning and economic development. Each integrates green objectives into the routine practices and processes of community planning.

- The Climate Prosperity Project has engaged several pilot communities in which local economic development practitioners, planners, and entrepreneurs embrace the premise that innovation, efficiency, and conservation of all natural and human resources is the best way to increase jobs, incomes, productivity, and competitiveness.
- California aims to coordinate transportation and land-use plans at the regional level for consistency with regional greenhouse gas

reduction targets, housing goals, and local interests revealed through participatory planning.

- Community and economic development organizations have come together in Cleveland to create a “Blueprint for a Green Economy” featuring locally-owned and managed enterprises.

Organizer:

Nathan Sandwick, Science Fellow, Natural Resources Defense Council

Additional Discussants:

Marc Weiss, Director, Global Urban Development

Ted Howard, Executive Director, Democracy Collaborative, University of Maryland

22. **Moving to Future States: From Today to Green and Beyond** (*Polaris B*)

Large organizations and governments today face massive challenges to reduce their environmental impact, and improve sustainable performance to achieve new future states – in a capital- and resource-constrained world.

Team Carbon (Clean|Efficient|Power) grew from the need to address these challenges—and integrates field engineering with future thinking and scenario-building planning, supported by world-class energy-, logistics- and management-consulting implementation expertise.

In this symposium, Team Carbon will briefly present several different dimensions of the overall “systems” challenge, share some successful cases, and elaborate how to begin “realistic first-steps”— while inviting stories and insight from session attendees.

Specifically, we’ll address the constraints regarding taking leveraged approaches when solving technical problems and creating economic opportunities, and will explore effective methods for eliminating or reducing those constraints.

Organizer:

Team Carbon

Moderator:

Evan Smith, Team Carbon/Metamorphosis Group

Additional Discussants:

Dave Mosby, Senior Consultant, Talisen Technologies (former Director of Facilities, State of Missouri)

Hiroko Kawai, Principal, Rocky Mountain Institute, Mobility and Vehicle Efficiency Practice

Patrick O’Shei, Senior Consultant, Metamorphosis Management Group (former COO/Capital Projects Manager, Kripalu Center)

25. **Climate Security in an Age of Uncertainty** (*Hemisphere A*)

Scientists and critics argue that the IPCC’s projections are too conservative and that the climate is changing at a much more rapid rate than previously projected. Climate change will likely add tensions in stable regions of the world, and threatens to multiply instability in some of the most volatile regions.

Climate change is projected to increase water scarcity in already struggling regions and increase loss of arable land which can lead to weakened governance, economic collapse, human migrations, and therefore potential conflicts.

This panel will discuss the most alarming projections of climate change, the problems associated with uncertainty, and what that means for national defense, energy security, food security and the economy. The panelists will offer their opinions on the best approaches for increasing our climate security.

Organizer:

Kate Graves, Program Director, Island Press

Moderator:

Todd Baldwin, Vice President and Associate Publisher, Island Press

Additional Discussants:

Joe Romm, Editor of Climate Progress; Senior Fellow at the American Progress

Robert S. Young, Director of the Program for the Study of Developed Shorelines, Professor of Coastal Geology at Western Carolina University

Jay Inslee, U.S. Representative for the 1st District of Washington State (invited)

Leo Wiegman, Investigator-in-Chief, E to the Fourth, Co-author, *The Climate Solutions Consensus*, Mayor, Croton, NY

26. **Rural Economy and Agriculture: The Green Path to Prosperity** (*Horizon B*)

It is time to envision a new vibrant green rural American economy and how we might get there. New opportunities provided by interest in sustainable energy and organic and sustainable agriculture can help to create a new rural “bio-economy” that provides for the health and wealth of all Americans. There are considerable challenges in creating the vision and in transitioning from the current condition of rural America.

This session provides an opportunity to hear from leading thinkers and doers. It will also feature a preview of a new public television mini-series America’s Food Print by Emmy Award-winning producer Dale Bell.

Organizer:

Sally Kane, Sally Kane Associates

Discussants:

Dale Bell, Co-Director, Media Policy Center

Gary Radloff, Midwest Energy Policy Director,
Wisconsin Bioenergy Initiative

Gary Hirshberg, President and CEO, Stonyfield
Farm, Inc.

Carol Jones, Economic Research Service,
USDA

Jeffrey Domanski, Princeton University

Arthur Allen, Journalist and writer

27. **Local and Regional Innovation Processes in the Green Economy: Experiences from Sweden and Silicon Valley** (*Polaris C*)

The theme of the seminar provides European and US experiences from local and regional green economy initiatives. In California, regional organizations located in Silicon Valley describe California as a hot-bed for clean technology (JVSV, 2009) and are tracking signs of the next wave of green innovation (Next10, 2007). This is contrasted with experiences from Swedish participatory scenario construction generating images sustainable future urban life in Stockholm and Sweden. The process-oriented goal of learning in deliberative scenario construction is highlighted in a European research project. The constellations of forums and involvement of stakeholders in governance processes is also featured in studies recognized as communicative planning practice and the question also becomes relevant when implementing future-oriented development in European metropolitan regions (Healey, 2000). Moreover, the concept of open innovation processes is introduced to the context of participatory scenario construction comparing shared ground in terms of user involvement in search of novel solutions and also increasing robustness of action plans implemented to reduce climate change and in the search for innovation and clean technology. This is examined by discussing drivers and catalytic decision-paths made by different user groups in the California Solar Initiative. This initiative shows also a steep increase in solar panel installations made by the commercial sector. It is relevant to get a better understanding of different user-groups and their roles for market introduction. This includes product development of “green gadgets”, such as the outdoor community’s interest in product development of solar charger for hand-held electronic devices as well as aforementioned solar panel installations in urban areas.

Organizer:

Katarina Larsen, KTH – The Royal Institute of
Technology, Stockholm, Sweden

Additional Discussants:

Karen Widegren, Science and Technology
Attache, Swedish Agency for Growth Policy
Analysis, San Francisco 2008/2009 (invited)

28. **Green Forests, Greener Revenues: Tools for Forest Carbon and Other Ecosystem Services** (*Meridian D&E*)

The goal of this symposium is to present a suite of tools for decreasing barriers to entry and linking project developers, markets and buyers that also facilitate multi-objective forest management (and the associated co-benefits thereof). This symposium presents an overview of education, science and financing initiatives to develop this market and incentivize a greater range of buyers and sellers to participate fully in forest carbon projects.

We will highlight several tools, notably an aggregation framework for small land owners and a private forestland investment fund, which are already seeing on the ground success. In addition, we will discuss the transferability and applicability of these tools and methods to other emerging markets. Not only are there possibilities for the forest carbon market model to be expanded to other land uses, such as agriculture, but also to other ecosystem services such as wildlife habitat, water quality, and wetlands. We also will discuss the current status of US policy on and markets for ecosystem services. Finally, we will discuss emerging complimentary initiatives, such as tax credits and regulatory streamlining. Large-scale adoption of the ideas, tools and policy discussed in this symposium has the potential to create a wave of investment in ecosystem function and health that far eclipses what has yet been achieved with the public funds currently available for restoration and preservation work.

Organizer:

Sarah Kruse, Senior Economist, Ecotrust

Moderator:

Astrid Scholz, Vice President of Knowledge
Systems, Ecotrust

Additional Discussants:

Sally Collins, Director, USDA Office of
Ecosystem Services and Markets

Bettina von Hagen, CEO, Ecotrust Forest
Management, Inc.

Steve Dettman, Forest Carbon Program
Manager, Ecotrust

Michael Jenkins, President and CEO, Forest
Trends (invited)

29. **Understanding and Solving Our Toxic Predicament: Greening the Chemical Industry** (*Horizon A*)

Over the past 30 years, the EPA has required testing of only 200 of the 80,000 chemicals used to manufacture household products, and we continue to introduce new, untested substances into the environment. Despite our ability to detect and analyze substances and their effects on human health,

this lack of oversight illustrates the challenge of regulating toxics.

This panel will discuss the major toxic sources and their interference with the biological mechanisms that determine our health, and how they are being found in nearly every natural system, from the air we breathe to polar ice. There are cost-effective alternatives to these substances, and the scientific community, the general public, and policy makers have a role to play in strengthening toxics regulation and promoting healthy solutions.

Organizer:

Jaime Jennings, Senior Publicist, Island Press

Moderator:

Karen Peabody O'Brien, Executive Director, Advancing Green Chemistry


Additional Discussants:

Elizabeth Grossman, Freelance Journalist and Author, *Chasing Molecules: Poisonous Products, Human Health, and the Promise of Green Chemistry*

Frank Ackerman, Director of Research and Policy Program, Global Development and the Environment Institute at Tufts University

John Warner, President and Chief Technology Officer, Warner Babcock Institute for Green Chemistry

Book Signing
Mezzanine Level of Atrium Hall



Thursday 12:00pm to 1:30pm
Friday 12:45pm to 1:15pm



The CarbonPlus Calculator has been developed by US Forest Service researchers and their partners to help people estimate their carbon dioxide emissions - what is sometimes called the "carbon footprint."

Designed originally for the public, the new 2009 version of the calculator adds features specifically for businesses and government agencies to identify ways to reduce their emissions. Cities can use the increased awareness created by the calculator to encourage support of local tree-planting and greening programs. This tool complements the suite of land and landscape-based tools for estimating and inventorying forest carbon.

<http://www.nrs.fs.fed.us/carbon/tools/>

Green Pioneers Exhibition

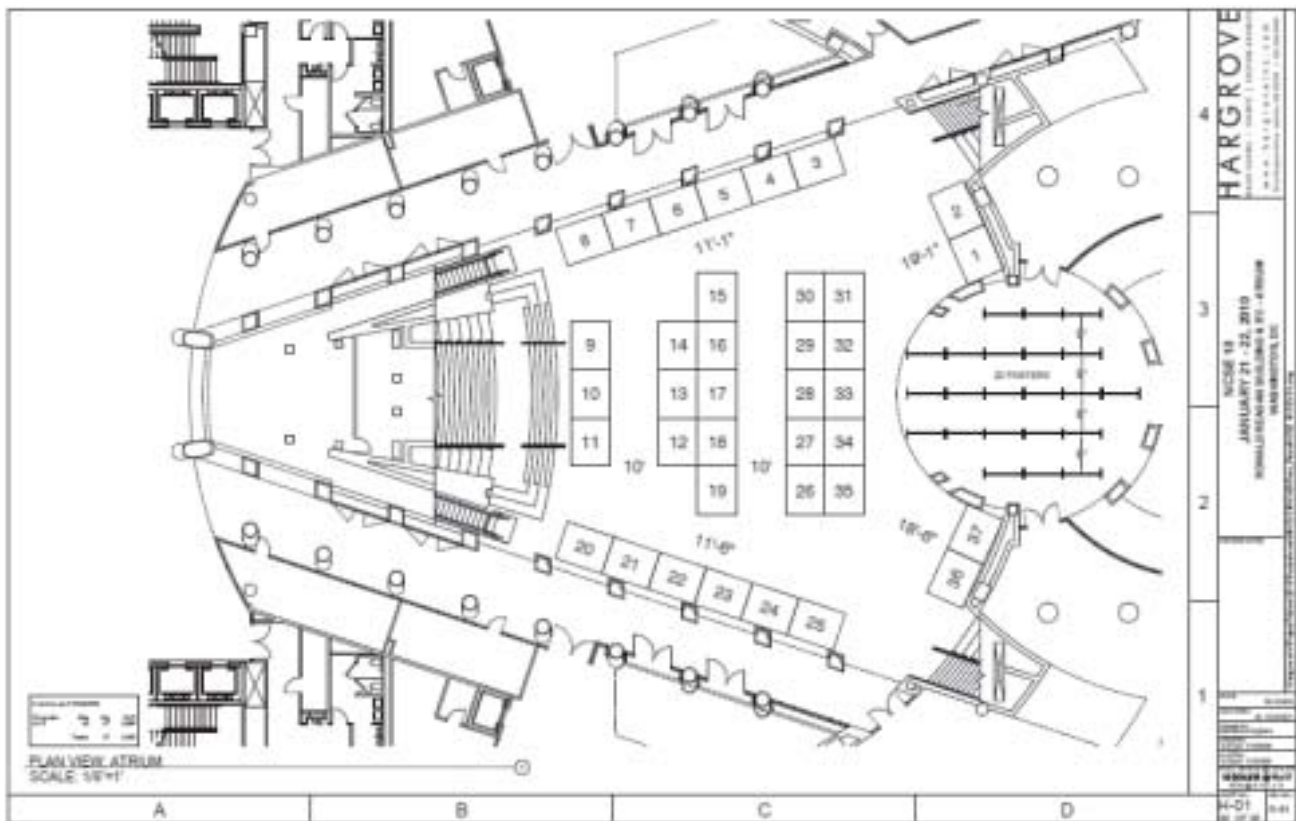
January 21-22, 2010

Thursday Hours – 8:00 am to 8:00 pm

Friday Hours – 8:00 am to 4:30 pm

Note: Exhibits will be held in the Atrium

9	George Washington University – School of Law	19	Centers for Disease Control and Prevention
10	Columbia University - MA, Climate & Society	26	National Council for Science and the Environment
11	NOAA- ECSC Florida A&M	27	National Council for Science and the Environment (NCSE)- Earth Portal
12	National Institute for Environmental Health Sciences/ Environmental Health Perspectives (NIEHS/EHP)	28	U.S. Geological Survey (USGS)
13	Island Press	29	U.S. Forest Service
14	Environmental Law Institute	30	U.S. Department of Energy – Biomass Program
15	EPA – Green Chemistry Program	31	United Parcel Service
16	EPA – Office of Research and Development	32	NASA Global Climate Change Education Solutions
17	American Forests – CITYgreen		The New York Times
18	Covanta Energy		



Poster Session

Note: The main poster session question and answer period will take place on Thursday, January 21, from 12:15 pm to 1:30 pm. Posters will be up for the duration of the conference Thursday and Friday in the Atrium Oculus.

1. **Climate 2030: A National Blueprint for a Clean Energy Economy**
Rachel Cleetus, Steven Clemmer & David Friedman, Union of Concerned Scientists
2. **Interweaving Reading Comprehension and Study Strategy Development with Global Warming Education**
David Fallick, Montgomery College
3. **Solar Powered Circulation: An Ecological Approach to Solving Water Quality Problems while Reducing Atmospheric Emissions and Chemical Applications**
H. Kenneth Hudnell, University of North Carolina at Chapel Hill's Institute for the Environment, SolarBee, Inc.
4. **Conceptual Design for Low-Impact, Low-Cost, Sustainable Community Housing**
Keith McHugh, Austin Mowles, Caroline Watson, Kendrick Chittock, Garrett Schaperjahn, Roanoke College, & Jon Cawley, Roanoke College
5. **Biochar-Based Soil Composition for Application in Urban Forestry Tree Well Design**
Kendrick Chittock, Caroline Watson, Austin Mowles, Keith McHugh, Roanoke College, Garrett Schaperjahn & Jon Cawley, Roanoke College
6. **Carbon Footprint of Water Consumption: Case Study**
Heather Poole & Tamim Younos, Virginia Tech, Virginia Water Resources Research Center
7. **The Institutional Demo-technic Index - A Comparison of Technological Energy Consumption at U.S. Colleges and Universities**
Leisha Vance & Stephen Boss, University of Arkansas
8. **Targeted Manipulation of Transcription Factors of Drought Response in Populus to Alter Drought Tolerance**
Alina Campbell Fernandez, Tongming Yin, Xiaohan Yang, Lee Gunter, Sara Jawdy, Xinye Zhang, Maud Hinchee & Timothy Tschaplinski, Oak Ridge National Laboratory (ORISE appointment) and The University of Tennessee Knoxville
9. **The Committee on the Marine Transportation System's (MTS) Research and Development Strategic Plan: R&D Needs for a Green MTS:**
Sandra Knight, Jeff Lillycrop, Safra Altman, National Oceanic and Atmospheric Administration
10. **Green Chemistry: The Mediator in a Green Economy**
Charles Vannoy, University of Miami
11. **Using Zebrafish (Danio rerio) as a Bio-Indicator of Estrogen Pollution in the Roanoke River of Virginia**
Garrett Schaperjahn & Chris Lassiter, Roanoke College
12. **Sustainable Large-Scale Forest Restoration Treatments in Arizona with Watershed Benefits**
Abraham E Springer, Northern Arizona University

13. **Small Business Case Study: A Model for Reducing Greenhouse Gas Emissions Cost-Effectively:**
Tom Bowman, Bowman Global Change
14. **Iron Oxide Coated Multiwall Carbon Nanotubes for the Removal of Arsenic from Water:**
Susana Addo Ntim & Somenath Mitra, Schlumberger Foundation Faculty for the Future, New Jersey Institute of Technology
15. **The Poudre Learning Center: A Natural Site for Students in Local Schools to Explore Sustainability in Colorado:**
Yeni Garcia, Kim Greeson & Abby Roukema, University of Northern Colorado
16. **How “Green” is Green? - A study to determine the relative toxicity of standard household cleaning products using *Daphnia magna*:**
Christina Read, Curtis Morin, Sylvie Charette, Newton Peres, Sarah Bunting, Fleming College

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NCSE extends a special thanks to the following Collaborating Organizations for their generous participation in the conference program and assistance in spreading the word about our conference.

<i>Amtrak</i>	<i>Institute for Food & Agricultural Standards (IFAS) - Michigan</i>
<i>Ball State University Council on the Environment (COTE)</i>	<i>State University</i>
<i>Center for the Advancement of the Steady State Economy (CASSE)</i>	<i>Heinz H. John III Center</i>
<i>Center for Integrated Environmental Research - University of</i>	<i>Planet Better Place - ECO-INNOVATIONS</i>
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<i>Ethical Markets Media</i>	<i>Transportation for America</i>
<i>Global Commerce Forum</i>	<i>U.S. Partnership for Education for Sustainable Development</i>
<i>Global Environmental Management Initiative (GEMI)</i>	<i>United Nations Environment Programme (UNEP)</i>
<i>The Green Collar Association</i>	<i>WebsEdge</i>
<i>Greenhouse Gas Management Institute</i>	<i>World Biojet Alliance</i>
<i>National Research Center for Women & Families</i>	<i>Women's Network for a Sustainable Future</i>
<i>International Association for Impact Assessment</i>	

The New Green Economy

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NCSE would also like to thank our volunteers, session organizers and chairs, note-takers, reporters, assistants, and discussants for their generous support

Workshop Locations

Note: Detailed directions to all workshop locations from the Ronald Reagan Building can be found in your conference bag and at the registration desks. Unless indicated otherwise, locations are in downtown DC (see map).

Washington Club, 15 Dupont Circle, NW, Washington DC 20036	01. Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002)
National Audubon Society 1150 Connecticut Avenue NW, Washington, DC 20036	02. The New Conservation Strategy and the New Green Economy
The Potomac Institute for Policy Studies Ballston Metro Center Office Tower 901 N. Stuart Street, Suite 200 Arlington, VA 22203 (Orange Line Metro, Ballston Station)	03. Alternatives to Neoclassical Economics for Business and National Security
U.S. Green Building Council 2101 L Street, NW, Suite 500 Washington, DC 20037	04. Greening the Building Envelope – Research Driven Product and Market Development of Green Roof and Green Wall Technologies
H. John Heinz III Center, 900 17th Street, NW, Suite 700 Washington, DC 20006	07. Building Undergraduate and Graduate Programs in Ecological Economics
Herman Miller Headquarters 600 14 th Street, Suite 700 Washington, DC 20005	08. An Integrated Approach to Addressing Sustainability in Undergraduate Science, Technology, Engineering, and Mathematics (STEM) Learning Environments
Nixon Peabody LLP, Conference Room, 401 9 th Street, NW, Washington, DC 20004	09. How Our Nation’s Colleges and Universities Can Generate Solutions for the New Green Economy
American Association for the Advancement of Science (AAAS) 2 nd Floor 1200 New York Avenue, NW Washington, DC 20005	10. Climate 101: Lessons from the Essential Principles of Climate Literacy
The George Washington University Marvin Center, Room 308 800 21 st Street, NW Washington, DC 20052	11. Build a Solar Cooker
Society for Conservation Biology 1017 O Street NW Washington, DC 20001	12. Greening Your Organization – The Unique Challenge of Greening Your Non-Profit
Defenders of Wildlife Conference Room, 1st Floor 1130 17 th Street, NW Washington, DC 20036	14. Lobbying for Trees
The George Washington University Marvin Center, Room 310 800 21 st Street, NW Washington, DC 20052	15. An Introduction to Green Jobs – For Those Interested in Obtaining One
Washington Club, 15 Dupont Circle, NW, Washington DC 20036	16. (Morning-Only) Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002)

The George Washington University Marvin Center, Room 302 800 21 st Street, NW Washington, DC 20052	17. Social Networking: Using the Internet to Promote Your Work!
University of the District of Columbia Building 42, Room 110 4200 Connecticut Avenue, NW Washington, DC 20008	18. Using GIS for Effective Green Energy
Potomac Room City Club at Columbia Square Columbia Square Building 555 Thirteenth Street NW Washington, DC 20004	19. Case Studies in Green IT
Defenders of Wildlife Conference Room, 1 st Floor 1130 17 th Street, NW Washington, DC 20036	21. The Art of Creating Green, Functioning, Residential Communities: Biodiversity and Water
American Association for the Advancement of Science (AAAS) 2 nd Floor 1200 New York Avenue, NW Washington, DC 20005	22. Environmental Education and Action: Giving Students the Tools to Make a Difference in the World
Robert H. Smith School of Business University of Maryland (Classroom C-3) Ronald Reagan Building 1200 Pennsylvania Avenue, NW Washington, DC 20004	23. What Does Green Mean? Sustainability Curricula in U.S. Business Schools
Nixon Peabody LLP Conference Room 401 9 th Street, NW Washington, DC 20004	24. Lessons Learned from Engaged Scholarship for Sustainability On Campus and Beyond
University of the District of Columbia Building 42, Room A-06 4200 Connecticut Avenue, NW Washington, DC 20008	25. Practical Ecoliteracy: Educating Green Leaders for a Green Economy
The George Washington University Marvin Center Room 308 800 21 st Street, NW Washington, DC 20052	26. The Green Learning Curve: Employee Environmental Education
Academy for Educational Development 1825 Connecticut Ave, NW Washington, DC 20009 (Red Line Metro, Dupont Circle Station)	27. Sustainable Societies: Education for Economic, Environmental and Cultural Transformation
The George Washington University Marvin Center, Room 310 800 21 st Street, NW Washington, DC 20052	28. Rainwater Harvesting & Use
William Penn House 515 East Capitol Street SE Washington, DC 20003 (Orange/Blue Line Metro, Capitol South Station)	29. How Collaborative Processes Can Be Used to Reach Appropriate and Timely Environmental Decisions
Ariel Rios North Building – <i>ID Required</i> Room 5530 1200 Pennsylvania Avenue, NW Washington, DC 20460	30. Sustainable Leadership Practices™...Green and Beyond

(Federal Triangle Station)	
University of the District of Columbia Building 41, Room 322 4200 Connecticut Avenue, NW Washington, DC 20008	31. Practical Assessment and Valuation of Ecosystem Services with ARIES and MIMES
	CANCELLED
The George Washington University Burns Moot Court Room 2000 H Street, NW Washington, DC 20052	33. Legal Issues Relating to Green Buildings
United Nations Environment Programme/Regional Office for North America 900 17 th Street, NW, Suite 506 Washington, DC 20006	34. How to Tailor Investment in a Green Economy – Identifying and Evaluating Opportunities in Green Sectors
The George Washington University Marvin Center, Room 307 800 21 st Street, NW Washington, DC 20052	35. Green Business Certification – Certifying Office-Based Retail Businesses
The George Washington University Marvin Center, Room 309 800 21 st Street, NW Washington, DC 20052	36. From Political Action to Grassroots Action
H. John Heinz III Center, 900 17th Street, NW, Suite 700 Washington, DC 20006	37. The New Green Economy influenceXchange: Social Media Best Practices and Workshop
Grand Hyatt Hotel 1000 H Street, NW Washington, DC 20001	39. Undergraduate Public Health Studies: Integrative Strategies, Curricular Frameworks, and Ongoing Networks
American Forests 734 15 th Street, NW Suite 800 Washington, DC 20005	40. Measuring Ecosystem Services with GIS
Washington Club, 15 Dupont Circle, NW, Washington DC 20036	41. (Afternoon-Only) Draft National Standard for Evaluating Green Technologies, Climate Mitigation Strategies, Products and Services Using LCA-Based Environmental Performance Assessment (SCS-002)

Breakout Locations

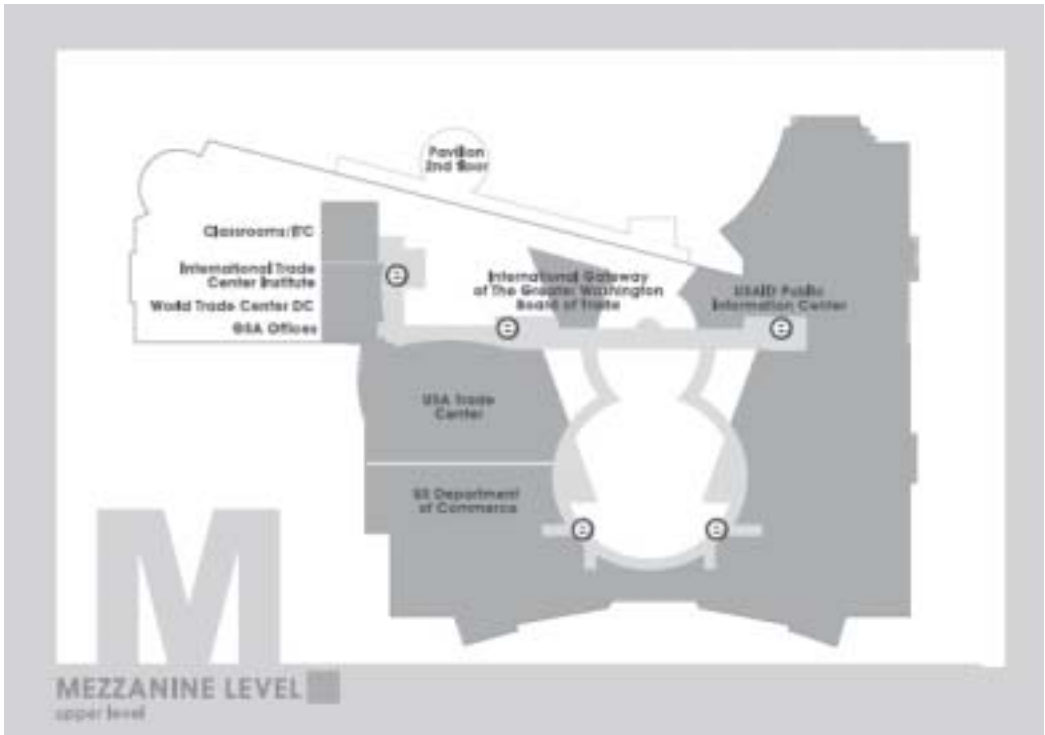
Ronald Reagan Building Concourse, Ground, and Mezzanine Levels are abbreviated to C, G, and Z respectively. Seminar rooms are located on the 7th floor of the Penn Ave Office Tower which is part of the Ronald Reagan Bldg. The Penn Ave Office Tower elevators are located between the Meridian and Polaris meeting room suites. JW Marriott Hotel Meeting and Ballroom Levels are abbreviated to M and B respectively. The JW Marriott is located across from the Ronald Reagan Building on Pennsylvania Avenue.

MD Classroom C1	C	01. Educating Interdisciplinary Business Leaders for a Sustainable Future
Meridian C	C	02. The Greenhouse Gas Professional: The State and Future of Climate Policy's Practitioner Class
MD Classroom C3	C	03. A New Generation of Sustainability Leadership: The Role of Higher Education in

		Building a Green Economy
MD Classroom C4	C	04. Green Collars and Green Places: Engaging Higher Education to Train the New and Diverse Generation of STEM Environmental Stewards
MD Classroom C5	C	05. Aligning Science, Education and Economic Markets
Meridian B	C	06. Greenforce Training: How Community Colleges Fill a Vital Role in Education of Clean Energy Workers
Meridian E	C	07. Transforming Federal Education Programs to Support the Transition to a Green Economy
Continental B	C	09. Green Accounting for the Green Economy: Improving GDP and the National Accounts of the United States
Continental C	C	10. Perverse Subsidies and Tax Code Impediments to a Sustainable Economy
Marriott-Garden Terrace A		11. Greening Federal Land Managing Agencies – Working With and Learning From Each Other
Marriott-Garden Terrace B		12. Sustainable Forest Management at Multiple Scales: Underpinning and Advancing the Green Economy
Marriott - Justice		13. Does the Payment for Ecosystem Services (PES) Model Hold Promise? Building on Lessons from Available Evidence
Hemisphere B	C	14. Strategies to Promote Sustainable Urban Planning and Development: Partnerships Between Academia, Citizens, and Local Government
Oceanic B	C	15. Trading Material Affluence for Time Affluence: A Critical Step Toward the New Green Economy
Marriott-Russell		16. Small Scale Distributive Energy Systems and Sustainability
MD Classroom C6	C	17. Sun, Wind, and Wildlife: Promoting Responsible Energy Development
MD Classroom C2	C	18. Ocean Energy: The Next Green Generation
Marriott-Garden Terrace		19. Bridging the GREEN-GAP Between Environmentally-Sustainable Product Research and Commercialization
Horizon A	G	20. Green Grid Ironies
Classroom D	M	21. The Economics of 350
Horizon B	G	22. After Copenhagen: The Economics and Physics of Implementing the COP 15 Agreements
Meridian D	C	23. Carbon Equivalent Landscapes: Setting the Agenda and Implementing the Details
Polaris A	C	24. The Role of Young Entrepreneurs in the New Green Economy
Marriott-Rayburn		25. Growing a New Vibrant “Green” Auto Industry – Who, What, When, Where and How Do We Expedite It?
Seminar Rm 2 7 th Floor		26. Application of Green Chemistry in Decision-Making
Polaris B	C	28. Green Economy Shifts in Science and Education
Oceanic A	C	29. What is “Green Technology” – How Do We Define It? How Do We Achieve It?
Polaris C	C	30. Recommendation to the U.S. Government: How to Build a Public-Private Partnership for a Green Economy
Continental A	C	31. Environmental Information Needs for a Green Economy
Hemisphere A	C	32. Sustainable Water Reuse for a Green Economy: Developing Policy Recommendations
Marriott-Cannon, Hart		33. The Three Pillars of Sustainability: Paradigm Shifts and Opportunities for the Public and Private Sector
International Gateway M		34. Public and Private Sustainability Policy: Is a Green Economy Sustainable and How Would One Know?
Seminar Rm 1 7 th Floor		36. Development of Nontraditional Educational Systems Within Developing Countries to Create a New, Sustainable Economy
Classroom C	M	38. Opportunities and Barriers for Green Infrastructure and Buildings: The Case of Water Management

Symposia Locations

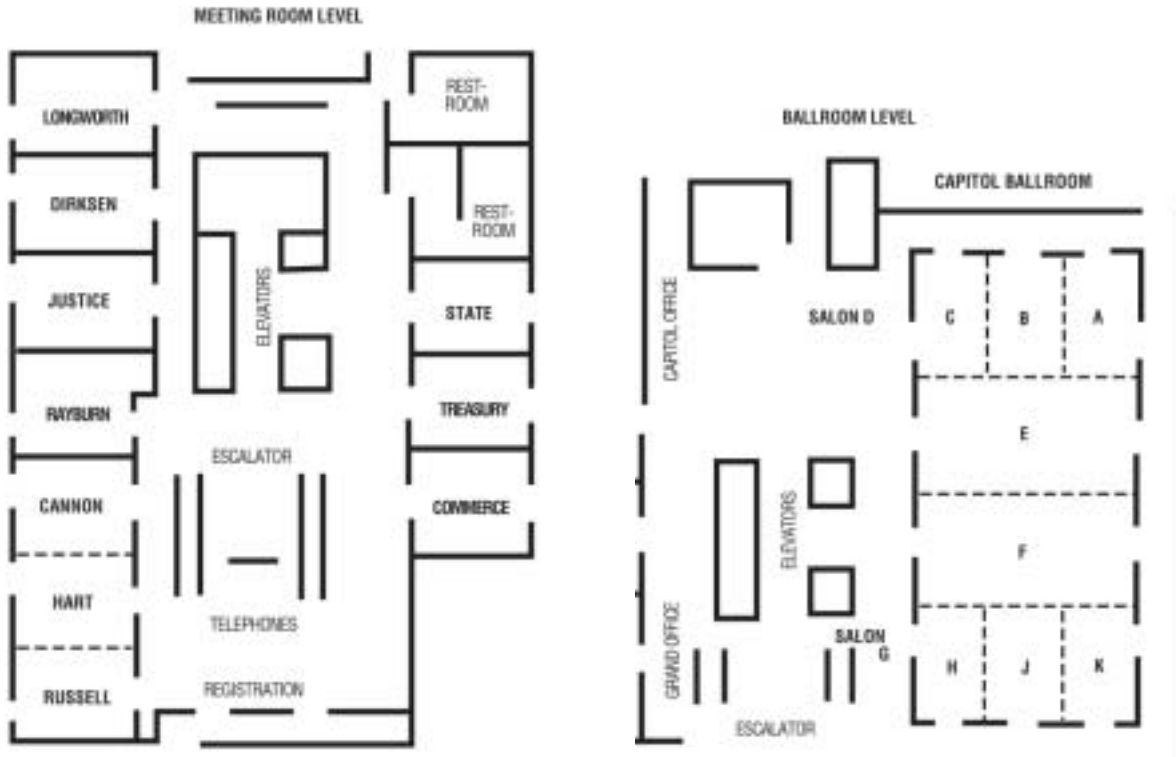
Horizon B	G	01. UNEP Green Economy Report – Findings and Recommendations for a Transition to a Green Economy
Meridian D&E	C	02. Counterpoint: The Limits of Markets to Achieve Sustainability: The Dangerous Illusion of Endless Growth
Oceanic A	C	03. Investments for a Green Economy
Hemisphere A	C	04. Report from the Copenhagen Climate Negotiations
Continental C	C	05. Movement Toward a “Sustainable Economy” in Minnesota and Vermont: How Impacting, How Lasting, How Transferable?
Polaris C	C	06. How Equitable Growth Supports the New Green Economy
Polaris B	C	07. Greening of Products and Operations: The Business Perspective
Polaris A	C	08. Not Business as Usual: Driving Change in the New Green Economy
International Gateway M		09. Blue + Green = Success
Hemisphere B	C	10. Ecosystem Services Session
Horizon A	G	11. Green Building, Green Jobs
MD Classroom C1	C	12. Green Infrastructure, Transportation, Energy and Transatlantic Learning
Continental B	C	13. A Renewable Energy Future: Can we Get from Here to There? or How Many Technologies Does it Take to Change a Light Bulb?
Oceanic B	C	14. Ensuring a Green Recovery: Biomass Certification Schemes from Both Sides of the Atlantic
Continental C	C	15. Technological Progress Toward a Green Economy: Innovation, Expectation, and Precaution
Oceanic A	C	16. Federal Family Grows Green Jobs
Oceanic B	C	17. Low Emissions Fuel Technologies – The Bridge to the Green Future
Polaris A	C	18. Green Grid Success Stories
Hemisphere B	C	19. Educating for a Green Economy
Continental B	C	20. Rethinking City Economics: How Green Infrastructure and Deconstruction Can Provide Green Jobs, Revitalize Communities, and Encourage Local Self-Reliance
International Gateway M		21. Local and Regional-Scale Blueprints for a Green Economy
Polaris B	C	22. Moving to Future States: From Today to Green and Beyond
Hemisphere A	C	25. Climate Security in an Age of Uncertainty
Horizon B	G	26. Rural Economy and Agriculture: The Green Path to Prosperity
Polaris C	C	27. Local and Regional Innovation Processes in the Green Economy: Experiences from Sweden and Silicon Valley
Meridian D&E	C	28. Green Forests, Greener Revenues: Tools for Forest Carbon and Other Ecosystem Services
Horizon A	G	29. Understanding and Solving Our Toxic Predicament: Greening the Chemical Industry
MD Classroom C1	C	30. Funding Strategies for Green Community & Regional Development: Achieving Rapid, Resilient Renewal of the Natural, Built & Socioeconomic Environments



JW Marriott Maps

1331 Pennsylvania Ave NW, Washington, DC 20004

The hotel is on the opposite side of Pennsylvania Avenue, directly across the street from the Ronald Reagan Building. It is next door to the National Theatre.





National Council for Science and the Environment

Improving the scientific basis for environmental decisionmaking

NATIONAL COUNCIL FOR SCIENCE AND THE ENVIRONMENT (NCSE) works for a society where environmental decisions are based on an accurate understanding of the science, and the potential consequences of inaction or action. NCSE specializes in programs that facilitate collaboration and develop solutions among diverse communities, institutions and individuals.

The Council features the following initiatives:



The **National Commission on Science for Sustainable Forestry** advances sustainable forestry with information and tools for forest managers and policymakers.



The **Wildlife Habitat Policy Research Program** produces information and tools to accelerate the conservation of wildlife habitat.

The **Outlook Forest Research Dialogue** enhances research coordination, collaboration, and partnership within the forestry community.



Over 160 **Affiliate Universities and Colleges** are provided services that improve the quality and effectiveness of their environmental education programs.



The **Council of Environmental Deans and Directors** at Affiliate schools promotes interaction and collaborative projects.

The **Council of Energy Research and Education Leaders** increases the contributions of university-based energy research and education to the challenges facing society.



The **EnvironMentors Initiative** engages underserved high school students across the nation through mentorship and research and prepares them for college, environmental careers, and enlightened citizenship.



The **Campus to Careers** program assists young people in environmental careers through internships and fellowships.



The annual **National Conference on Science, Policy and the Environment** brings together over 900 leaders from science, government, corporate and civil societies to develop and disseminate strategies to improve decisionmaking on a specific environmental theme.



The **Earth Portal** (www.earthportal.org) engages over 1,000 environmental experts and 50 partnering organizations from 60 countries to educate the public globally with free access to information on every environmental issue. The Portal includes the Encyclopedia of Earth, Earth News, Earth Forum, and Environment in Focus.



The **Science Policy** strategy educates Congress and the general public about the importance of environmental science and its applications, and supports specific programs that make it possible.

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