

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

Transitioning to Sustainability: The Challenge of Developing Sustainable Urban Systems

The National Academies' Second Sustainability R&D Forum

September 23, 2009

The National Academy of Sciences, Lecture Room
2100 C St. NW, Washington, D.C.

OBJECTIVES

- ☐ Share information about ongoing activities and strategic planning efforts, with an eye towards strengthening cross-agency, cross-sectoral partnerships
- ☐ Explore how federal agency efforts can complement/leverage the efforts of other key stakeholders
- ☐ Identify critical research gaps and needed analytical tools

- 8:30 AM **Welcome and Goals of the Forum**
Tom Graedel, Clifton R. Musser Professor of Industrial Ecology, Yale University
- 8:50 AM **Keynote Address**
Xavier de Souza Briggs, Associate Director for General Government Programs, Office of Management and Budget
- 9:20 AM **Panel: Developing Livable Urban Areas**
Moderator: Ann Bartuska, Acting Under Secretary for Natural Resources and Environment, U.S. Department of Agriculture
- This panel will consider the various dimensions of “livable” urban areas, and will comment on R&D that attempts to link public health, environmental management, and urban development goals*
- ☐ Michael Freedberg, Director, Division of Housing Technology Research, Office of Policy Development and Research, U.S. Department of Housing and Urban Development
 - ☐ Howie Frumkin, Director, National Center for Environmental Health, U.S. Centers for Disease Control
 - ☐ Amy Glasmeier, Head of Department of Urban Studies and Planning, Massachusetts Institute of Technology
 - ☐ Nancy Grimm, Co-Director, Central Arizona-Phoenix Long-Term Ecological Research Project
- 10:00 AM Audience Q&A

10:10 AM Break

10:30 AM **Panel: Resilience and Adaptation**

Moderator: Glen Daigger, Senior Vice President and Chief Technology Officer, CH2M Hill, Inc.

This panel will address the key environmental threats communities face and will discuss R&D on environmental impact reduction, resilient infrastructure, and adaptation measures

- ☐ Keelin Kuipers, Coastal Storms Program Manager, National Oceanic and Atmospheric Administration
- ☐ Walter Peacock, Professor and Director, Hazard Reduction and Recovery Center, Department of Landscape Architecture and Urban Planning, Texas A&M University
- ☐ Denice Wardrop, Assistant Director, Institutes of Energy and Environment, Penn State University
- ☐ William Werkheiser, Eastern Region Director, U.S. Geological Survey

11:10 AM Audience Q&A

11:20 AM **Panel: Models, Metrics, and Future Scenarios**

Moderator: Denise Stephenson Hawk, The Stephenson Group

This panel will focus on how urban change is modeled, how human and environmental outcomes can be measured, and what information is most useful (or needed) in assessing outcomes

- ☐ Jon Fink, Director, Global Institute for Sustainability, Arizona State University
- ☐ Thomas Parris, Vice President and Director of Sustainability Programs, ISCIENCES LLC
- ☐ Steward Pickett, Director, Baltimore Ecosystem Long-Term Ecological Research Program
- ☐ Dale Quattrochi, Senior Research Scientist, Earth Science Office, National Aeronautic and Space Administration
- ☐ Jennifer Wolch, Dean, College of Environmental Design, University of California, Berkeley

12:00 PM Audience Q&A

12:10 PM **Luncheon Keynote**

Adolfo Carrion, Director, White House Office of Urban Policy

1:00 PM

Panel: Moving Urban R&D into Practice

Moderator: Jeremy Harris, former Mayor of Honolulu

This panel will present the end-users' perspective and will explore opportunities to both broaden the impact of place-based R&D and disseminate promising practices more efficiently

- ☐ James Davenport, Project Manager, National Association of Counties
- ☐ John Frece, Director, Office of Smart Growth, EPA
- ☐ Harriet Tregoning, Director, District of Columbia Office of Planning
- ☐ Dana Williams, Mayor, Park City, Utah

1:45 PM

R&D Gaps and Opportunities (Small Group Discussions)

- ☐ **Tools and Knowledge Transfer**
- ☐ **Technology Development**
- ☐ **Research and Evaluation**

3:30 PM

Break

4:00 PM

Feedback from Group Rapporteurs

4:45 PM

Closing Comments

5:00 PM

CONCLUDE

The National Academies' Roundtable on Science and Technology for Sustainability will host a forum on September 23, 2009 to foster discussion of current and planned R&D activities on issues of sustainability in urban systems. More than half of the world's population now lives in urban areas and the share of urban residents is expected to grow. Cities and counties are already strained in their capacities to provide healthy, safe, and affordable environments for living and working. The challenge is thus to develop more environmentally sustainable urban systems that also provide for sustainable economic growth.

The goals of this forum will include:

- Sharing information about activities and strategic planning efforts of federal agencies, along with related initiatives from universities, the private sector, nongovernmental organizations, state/local agencies, and international organizations;
- Identifying areas for collaboration and better coordination among these different R&D programs; considering especially how federal agency efforts can best complement/leverage the efforts of other key stakeholders;
- Identifying critical research gaps and needed analytical tools;
- Suggesting the broader research and analysis needed to effectively support urban-level decision-making; and
- Exploring how urban sustainability can move beyond stovepipes and sectors to systems-level thinking and effective interagency cooperation.

The Urban Sustainability Forum participants will be drawn from federal agencies, local and state governments, universities, nongovernmental organizations, and the private sector. All are expected to be engaged in R&D or other innovative programs taking a systems approach (e.g. cross-sector, cross-media) to enhancing the sustainability of urban areas. Participants will likely have their own working definitions of sustainability, but for the purposes of this forum, *sustainability refers to a goal of meeting human needs while conserving natural life support systems*. R&D is then defined as activities designed to explore interactions between human and environmental systems in urban areas, projects developed to mitigate negative consequences of these interactions, and evaluation of the knowledge generated throughout this process.