



May 2008

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INTRODUCTION

We are pleased to present you with *Sustainability at the National Academies*, a monthly update highlighting activities related to sustainable development from throughout the National Academies. Please visit our website for additional information on these and other activities at <http://sustainability.nationalacademies.org>.

The [Roundtable on Science and Technology for Sustainability](#) provides a unique forum for sharing views, information, and analyses related to sustainability. The goal for the Roundtable is to mobilize, encourage, and use scientific knowledge and technology to help achieve sustainability goals and to support the implementation of sustainability practices. Through its activities, the Roundtable identifies new ways in which science and technology can contribute to sustainability. What follows is a brief summary of sustainability-related activities being conducted throughout The National Academies.

You are receiving this update based on your participation in ongoing or past activities of the Roundtable. If you would prefer not to receive future monthly updates or would like to be added to the recipient list, please contact Kathleen McAllister at 202-334-2047 or Sustainability@nas.edu or visit our website.

PARTNERSHIPS FOR SUSTAINABILITY SYMPOSIUM

Partnerships for Sustainability: Examining the Evidence, A Symposium

Washington, DC, June 18-19, 2008

The U.S. National Academies' Roundtable on Science and Technology for Sustainability will convene a symposium to examine the multi-stakeholder partnership record in addressing issues associated with sustainability. The symposium will focus on the challenges that the partnerships have addressed, including: involvement of several sectors, action at varying scales, from local to global, a combination of public and private financing, and a complex set of science questions.

<http://sustainability.nationalacademies.org/Partnerships.shtml>

For more information, please contact Kathleen McAllister at kmcallister@nas.edu or 202-334-2047.

SCIENCE AND INNOVATION FOR SUSTAINABLE DEVELOPMENT, A FORUM

Science and Innovation for Sustainable Development, A Forum

The Forum: Science and Innovation for Sustainable Development, co-hosted by the American Association for the Advancement of Science (AAAS) and the Initiative on Science and Technology for Sustainability (ISTS), aims to promote the sharing of knowledge, ideas, and goals among the scientists, practitioners, and policy-makers working on science and technology for sustainability. The site has recently launched a discussion board to further connect and engage this community. Current discussion topics include methodologies for sustainability science and sustainability as an undergraduate degree. There is also a special section for the Network for Emerging Leaders in Sustainability that includes DC-area events.

Website: <http://sustainabilityscience.org/>

NEW REPORTS

Desalination: A National Perspective

Recent advances in technology have made desalination of seawater and groundwater a realistic option for increasing water supplies in some parts of the United States, and desalination will likely have a niche in the nation's future water management portfolio. However, its potential is constrained by a host of financial, social, and environmental factors. Substantial uncertainties remain about the environmental impacts of desalination, which have led to costly permitting delays. The National Research Council, with the support of the U.S. Bureau of Reclamation and the U.S. Environmental Protection Agency, convened a committee to assess the state-of-the-art in desalination technologies, identify implementation challenges, and provide recommendations for action and research. The report concludes that a coordinated, strategic research effort with steady funding is needed to better understand and minimize desalination's environmental impacts and to find ways to further lower its costs and energy use.

http://www.nap.edu/catalog.php?record_id=12184

First Report from the NRC Committee on the Review of the Louisiana Coastal Protection and Restoration (LACPR) Program

This report from the National Research Council provides advice and recommendations to improve an Army Corps of Engineers' draft report for Louisiana coastal protection and restoration. The Corps' report does not identify clear priorities for project implementation -- including ecosystem restoration, hurricane protection, and nonstructural measures such as buyouts -- nor does it provide evidence that sediment resources for all proposed restoration projects will be available.

http://www.nap.edu/catalog.php?record_id=12215#toc

UPCOMING MEETINGS

May

Committee on the Human Dimensions of Global Change, May 21-22, 2008

<http://www7.nationalacademies.org/hdgc/>

21st Century Systems Agriculture," May 22, 2008

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2734>

June

Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy, June 3-4, 2008

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2735>

Reducing Stormwater Discharge Contributions to Water Pollution, June 9-10, 2008, Woods Hole, MA

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2494>

Partnerships for Sustainability: Examining the Evidence, A Symposium, June 18-19, 2008

<http://sustainability.nationalacademies.org/Partnerships.shtml>

The Roundtable on Science and Technology for Sustainability, June 19-20, 2008

<http://sustainability.nationalacademies.org/roundtable.shtml>

PROJECTS IN DEVELOPMENT

Pathways to Urban Sustainability Initiative

The National Academies are planning a multi-year, multi-country initiative to address one of the central challenges and opportunities of the 21st century—the use of science and technology to help transform rapidly urbanizing regions of the developing world into “sustainable cities.” Over the past year, the Academies launched this ambitious program through on-the-ground planning activities in China, South Africa, Tanzania and Mexico. We are currently raising funds for the next phase of the initiative, which will include an international symposium to examine the major trends, challenges, and potential paths forward to urban sustainability in developing world cities, and a set of on-the-ground projects in China to be carried out in partnership with the Chinese Academies of Science and Engineering and other leading Chinese science and technology institutions. For more information on past urban sustainability activities, visit:

http://sustainability.nationalacademies.org/proj_dev.shtml

ONGOING ACTIVITIES

Sustainability---The Issue

The Roundtable on Science and Technology for Sustainability

<http://sustainability.nationalacademies.org/index.shtml>

Partnerships for Sustainability

<http://sustainability.nationalacademies.org/current.shtml>

People and Their Communities

Public Health Decision-Making Under Uncertainty

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48847>

Public Participation in Environmental Assessment and Decision Making

<http://www8.nationalacademies.org/cp/projectview.aspx?key=34>

The Committee on the Human Dimensions of Global Change

<http://www7.nationalacademies.org/hdgc/>

Toward Sustainable Critical Infrastructure Systems -- Framing the Challenges: A Workshop

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48850>

Life Support Systems: Atmosphere, Water, and Food

Advancing Desalination Technology

<http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=48674>

A Strategy to Mitigate the Impact of Sensor Desscopes and De-manifests on the NPOESS and GOES-R Spacecraft

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48834>

Climate Change and U.S. Transportation

<http://www8.nationalacademies.org/cp/projectview.aspx?key=186>

Committee on Hydrology, Ecology, and Fishes of the Klamath River Basin

<http://www8.nationalacademies.org/cp/projectview.aspx?key=216>

Contaminated Drinking Water at Camp Lejeune

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BEST-K-06-08-A>

Developing Mesoscale Meteorological Observational Capabilities

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48732>

Ecological Impacts of Climate Change

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BLSX-K-07-03-A>

Emerging Technologies in Agriculture to Benefit Farmers in Africa and South Asia

<http://dels.nas.edu/banr/index.shtml>

International and National Measures to Reduce Marine Debris and Its Impacts

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=OSBX-U-07-02-A>

Mortality Risk Reduction Benefits from Decreasing Tropospheric Ozone Exposure

<http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=BEST-K-06-10-A>

FEMA Flood Maps: Accuracy Assessment and Cost-Effective Improvements

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BESR-U-06-06-A>

Reducing Stormwater Discharge Contributions to Water Pollution

<http://www8.nationalacademies.org/cp/committeev.aspx?key=48711>

Review of CCSP Draft Synthesis and Assessment Products: 1.3 Re-analyses of historical climate data and implications for attribution

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48840>

Review of CCSP Draft Synthesis and Assessment Products: 3.2 Climate projections based on emissions scenarios for long-lived radiatively active trace gases
<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BASC-U-06-06-A>

Review of Water and Environmental Research Systems (WATERS) Network
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48784>

Strategic Advice on the U.S. Climate Change Science Program
<http://www8.nationalacademies.org/cp/projectview.aspx?key=209>

Strategies and Methods for Climate-Related Decision Support
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48846>

Water Resources Activities at the U.S. Geological Survey
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48695>

Economy and Industry

Competitiveness and Workforce Needs of U.S. Industry
<http://www8.nationalacademies.org/cp/projectview.aspx?key=41210>

National Academies Materials Forum on Corrosion Education for the 21st Century
http://www7.nationalacademies.org/nmab/current_activities.html

Strategic Directions for the Geographical Sciences in the Next Decade
<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BESR-U-06-02-A>

21st Century Systems Agriculture
<http://dels.nas.edu/banr/>

Natural Systems

Hydrologic Impacts of Forest Management
<http://www8.nationalacademies.org/cp/projectview.aspx?key=1935>

Review of Louisiana Coastal Protection and Restoration (LACPR) Program
<http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=WSTB-U-06-04-A>

Risk of Oil Spills in the Aleutian Islands: Comprehensive Risk Assessment
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48853>

The Importance of Deep-Time Geologic Records for Understanding Climate Change Impacts
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48865>

Institutions and Indicators

Key National Indicators Initiative (KNII)
Currently, this project is not available on the web. As soon as a web link becomes available, it will be included in this update.

Sustainability Research and Development

Challenges and Opportunities in Earth Surface Processes
<http://www8.nationalacademies.org/cp/committeevie.aspx?key=48867>

Design Issues for the NOAA Sector Applications Research Program
<http://webapp.nationalacademies.org/cp/projectview.aspx?key=48688>

Evaluation of the Research Plan of the Dept of Housing and Urban Development
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48755>

Grand Challenges for Engineering
<http://www.engineeringchallenges.org/>

Grainger Challenge Prize for Sustainability
<http://www.nae.edu/nae/granger.nsf?OpenDatabase>

The Earth System Context for Hominin Evolution
<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BESR-U-06-01-A>

Sustainable Energy

America's Energy Future: Technology Opportunities, Risks, and Tradeoffs
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48817>

Assessment of Resource Needs for Development of Fuel Cell Hydrogen Technology
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48717>

Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48843>

Cleanup Technology Roadmap for DOE's Office of Environmental Management
<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=NRSB-O-06-03-A>

Energy Efficiency Standards: Alternative Approaches to Measurement
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48884>

Potential Energy Savings and Greenhouse Gas Reductions from Transportation
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48864>

Relationship of Development Patterns, Vehicle Miles Traveled, Energy Consumed
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48808>

Review of the DOE-BES Catalysis Research Activities and their Impact
<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BCST-L-07-02-A>

Review of the 21st Century Truck Partnership
<http://www8.nationalacademies.org/cp/projectview.aspx?key=48722>

Transitions to Sustainable Energy
<http://www.interacademy council.net/?id=9481>

Other Activities

Christine Mirzayan Science and Technology Policy Fellowship Program
<http://national-academies.org/policyfellows>

PNAS Sustainability Science, Special Features

PNAS offers a series of special feature issues that highlight emerging fields in the physical, social, and biological sciences and are edited by leaders in the field. Special Features include a cluster of Perspectives and peer-reviewed research articles. As a service to readers, Special Features are freely available online from the date of publication.

<http://www.pnas.org/misc/sustainability.shtml>

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