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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 **NEW** website for additional information on these and other activities at <http://sustainability.nationalacademies.org/index.shtml>

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

CALL FOR NOMINATIONS

21st Century Systems Agriculture

The study will be conducted by a committee of 20 members appointed by the National Academies, including experts in food and fiber production; agribusiness; agricultural economics and social science; agro-ecology; federal farm, trade, international development, environmental, and regulatory policy; farm finance and marketing systems; public health-related aspects of agriculture; pest-protection, crop and animal science, agronomy and water-quality science, and systems-agriculture research. In an update of the report, Alternative Agriculture, an NRC committee will study the science and policies that influence the adoption of farming practices and management systems designed to reduce the costs and environmental effects of agricultural production. A set of case-studies will be used to examine farming systems that address those concerns and to explore the factors that affect their implementation, economic viability, and success in meeting environmental and other goals of sustainability. For more information on this study, contact: Robin Schoen at rschoen@nas.edu.

<http://dels.nas.edu/dels/sot.php?pin=BANR-O-06-05-A>

NEW REPORTS

A Review of the Final Ocean Research Priorities Plan and Implementation Strategy

Ocean research offers countless benefits, from improving fisheries management to discovering new drugs to enabling early detection of tsunamis and hurricanes. At the request of the Joint Subcommittee on Ocean Science and Technology (JSOST), the National Research Council convened a committee to review the draft and final versions of the Ocean Research Priorities Plan and Implementation Strategy described in Charting the Course for Ocean Science in the United States: Research Priorities for the Next Decade, which represents the first coordinated national ocean research planning effort involving all federal agencies that support ocean science. This plan presents an ambitious vision for ocean research that will be of great benefit to the ocean sciences community and the nation and the report concludes that changes made to the draft document have significantly strengthened the plan overall. However, some aspects of the plan could benefit from further development or modification. The report recommends that JSOST employ a variety of outreach mechanisms to continue to engage nonfederal partners in ocean research planning efforts, such as establishing external committees to provide scientific and technical advice and to review progress on implementation of the research plan.

http://books.nap.edu/catalog.php?record_id=11984

NEW PROJECTS

Contaminated Drinking Water at Camp Lejeune

A committee of the National Research Council will review the scientific evidence on associations between adverse health effects and historical data on prenatal, childhood, and adult exposures to contaminated drinking water at Camp Lejeune, North Carolina. The committee will assess the strength of evidence in establishing a link or association between exposure to trichloroethylene, tetrachloroethylene, and other drinking water contaminants and each adverse health effect suspected to be associated with such exposure. For each health effect reviewed, the committee will determine to the extent practicable with the available scientific data (1) whether a statistical association between such contaminant exposures and the health effect exists, (2) whether there exist plausible biological mechanisms or other evidence of a causal relationship between contaminant exposures and

the effect, (3) the strength of evidence for causal inference for each of the health effects, and (4) other scientific considerations that may help the Department of the Navy prioritize future activities.

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

Review of CCSP Draft Synthesis and Assessment Products: 2.4 Trends in Emissions of Ozone-depleting Substances and Recovery

The NRC is appointing four separate committees to review four CCSP draft Synthesis and Assessment Products in the spring of 2007. An ad hoc committee will review CCSP SAP 2.4 Trends in Ozone-depleting Substances and Recovery. The committee will address the following review criteria (which are based on the NRC's own review criteria): Are the goals, objectives and intended audience of the product clearly described in the document? Does the product address all questions outlined in the prospectus? Are any findings and/or recommendations adequately supported by evidence and analysis? In cases where recommendations might be based on expert value judgments or the collective opinions of the authors, is this acknowledged and supported by sound reasoning? Are the data and analyses handled in a competent manner? Are statistical methods applied appropriately? Are the document's presentation, level of technicality, and organization effective? Are the questions outlined in the prospectus addressed and communicated in a manner that is appropriate and accessible for the intended audience? Is the document scientifically objective and policy neutral? Is it consistent with the scientific literature? Is there a summary that effectively, concisely and accurately describes the key findings and recommendations? Is it consistent with other sections of the document? What other significant improvements, if any, might be made in the document?

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BASC-U-06-05-A>

America's Energy Future: Technology Opportunities, Risks, and Tradeoffs

This study will critically evaluate the current and projected state of development of energy supply, storage and end use technologies. It will assess a range of technology options available in the U.S. that are sensitive to the array of relevant national strategic goals and global concerns. This study will not recommend policy choices, but will provide well-grounded estimates of the current contributions and future potential of existing energy supply and demand technologies as well as the potential for new technologies where substantial commercial deployment could be initiated in the next ten years, their associated impacts, and projected costs per unit of energy produced for new supply technologies or saved for technologies enabling reduced energy demand, and other factors that may significantly impact the potential for utilization.

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48817>

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

An ad hoc committee will conduct an assessment and prepare a report that will: Prioritize capabilities, especially those related to climate research, that were lost or placed at risk following recent changes to NPOESS and the GOES-R series of polar and geostationary environmental monitoring satellites. These include capabilities that were lost or degraded as a consequence of alterations in the planned constellation of spacecraft and/or the removal or reduction in scope of remaining instruments; and present strategies to recover these capabilities. In conducting its assessment, the committee will build on information from the

workshop that was conducted in June 2007 by the NRC panel on "Options to Ensure the Climate Record from the NPOESS and GOES-R Spacecraft" and on the panel's report expected to be issued in August 2007.

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=SSBX-L-07-08-A>

Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy

The committee formed to carry out this study will provide updated estimates of the cost and potential efficiency improvements of technologies that might be employed over the next 15 years to increase the fuel economy of various light-duty vehicle classes.

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48843>

UPCOMING MEETINGS

August

Reducing Stormwater Discharge Contributions to Water Pollution, August 21-23, 2007, Seattle, Washington

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingID=2099&MeetingNo=3>

Best Practices: Coordination of Transit, Regional Transportation Planning and Land Use Conference, August 26-28, 2007, Denver, CO

<http://guest.vente.com/EVENTS/Info/Summary.aspx?e=d2acf3d7-1d06-4e6f-8c18-955cc3c0cd97>

Review of the 21st Century Truck Partnership, August 28-29, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2269>

Independent Scientific Review of Everglades Restoration Progress, August 30-31, 2007, Miami, FL

<http://www8.nationalacademies.org/cp/meetingview.aspx?meetingid=2031>

September

Review of CCSP Draft Synthesis and Assessment Products: 1.3 Re-analyses of historical climate data and implications for attribution, September 4-6, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2284>

Evaluation of the Research Plan of the Department of Housing and Urban Development, September 5-6, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2263>

Evaluating the Efficiency of Research and Development Programs at the Environmental Protection Agency, September 7, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?meetingid=2073>

Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy, September 10-11, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingID=2283&MeetingNo=1>

Review of CCSP Draft Synthesis and Assessment Products: 2.4 Trends in Emissions of Ozone-depleting Substances and Recovery, September 11-13, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingID=2273&MeetingNo=2>

America's Energy Future: Technology Opportunities, Risks, and Tradeoffs

September 20-21, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2261>

Competitiveness and Workforce Needs of U.S. Industry, September 24-25, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingID=2276&MeetingNo=4>

Contaminated Drinking Water at Camp Lejeune, September 24-25, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingID=2278&MeetingNo=1>

Improving Risk Analysis Approaches Used By the U.S. EPA, September 27-28, 2007

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=2249>

October

Disaster Recovery, October 17, 2007

<http://dels.nas.edu/dr/f21.shtml>

Meeting of the Committee on Earth Resources, October 23-24, 2007

http://dels.nas.edu/besr/cer_events.shtml

Federal Sustainability Research and Development Forum, October 17-18, 2007

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

PROJECTS IN DEVELOPMENT

Partnerships for Sustainability

The Roundtable on Science and Technology for Sustainability plans to commission a series of review papers and use a symposium to develop a better understanding of key factors of success (and failure) for partnerships established to promote sustainability. A steering group will be appointed to develop a common framework for the reviews and organize the symposium, planned for fall, 2007. For more information on the Roundtable on Science and Technology for Sustainability, visit:

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

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>

People and Their Communities

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/>

Life Support Systems: Atmosphere, Water, and Food

Advancing Desalination Technology

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

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>

Developing Mesoscale Meteorological Observational Capabilities to Meet Multiple National Needs

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

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

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

Estimating 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/committeevi.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>

Sustainable Underground Storage of Recoverable Water

<http://www8.nationalacademies.org/cp/projectview.aspx?key=WSTB-U-04-02-A>

Strategic Advice on the U.S. Climate Change Science Program

<http://www8.nationalacademies.org/cp/projectview.aspx?key=209>

Water Implications of Biofuels Production in the United States

<http://dels.nas.edu/dels/sot.php?pin=WSTB-U-06-05-A>

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>

Critical Mineral Impacts on the U.S. Economy

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48725>

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

Natural Systems

Hydrologic Impacts of Forest Management

<http://www8.nationalacademies.org/cp/projectview.aspx?key=1935>

Independent Scientific Review of Everglades Restoration Progress

<http://www8.nationalacademies.org/cp/projectview.aspx?key=WSTB-U-03-04-A>

International Capacity Building for the Protection and Sustainable Use of Oceans and Coasts

http://dels.nas.edu/osb/capacity_building/capacity_building.shtml

The National Plant Genome Initiative: Achievements and Future

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=BLSX-K-07-01-A>

Review of Louisiana Coastal Protection and Restoration (LACPR) Program

<http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=WSTB-U-06-04-A>

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

Design Issues for the NOAA Sector Applications Research Program

<http://webapp.nationalacademies.org/cp/projectview.aspx?key=48688>

Evaluating the Efficiency of Research and Development Programs at the Environmental Protection Agency

<http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=CSEP-Q-07-01-A>

Evaluation of the Research Plan of the Department 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/grainger.nsf?OpenDatabase>

Sustainable Energy

Assessment of Resource Needs for Development of Fuel Cell and Hydrogen Technology

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48717>

Development and Implementation of a Cleanup Technology Roadmap for DOE's Office of Environmental Management

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=NRSB-O-06-03-A>

Energy Futures and Air Pollution in Urban China and the United States

<http://www8.nationalacademies.org/cp/projectview.aspx?key=131>

Relationships Among Development Patterns, Vehicle Miles Traveled, and Energy Consumption

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48808>

Review of the 21st Century Truck Partnership

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48722>

Review of the FreedomCAR and Fuel Research and Development Program, Phase 2

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48724>

Review of DOE's Office of Nuclear Energy, Science & Technology Research & Development Program

<http://www8.nationalacademies.org/cp/projectview.aspx?key=48668>

Transitions to Sustainable Energy

<http://www.interacademycouncil.net/?id=9481>

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