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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 Emi Kameyama at 202-334-2694 or Sustainability@nas.edu or visit our website.

NEWS

New Issue: The National Academies In Focus

The latest issue of The National Academies In Focus is now online. Articles feature several recent reports, including ones that examine the future of liquid fuels from coal and biomass in the U.S., assess the New Orleans Hurricane Protection System, and present new data on the status of female faculty in science and engineering at research universities. The issue also highlights other important news, events, and projects around the Academies and includes a listing of recent reports issued by the institution.

<http://infocusmagazine.org>

NEW REPORTS

Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use

The benefits to society of energy production and use are well-known, but energy also has many adverse effects not reflected in market prices, such as the damage air pollution imposes on human health and the environment. This congressionally-requested report from the National Research Council examines those “hidden costs” in an effort to inform energy-related policy decisions. The damages that the committee was able to quantify were an estimated \$120 billion in the United States in 2005, a number that reflects damages from air pollution associated with electricity generation relying on fossil fuels, motor vehicle transportation, and heat generation. The report also considers other effects that are not included in the figure, such as damages from climate change, harm to ecosystems, effects of some air pollutants such as mercury, and risks to national security.

http://www.nap.edu/catalog.php?record_id=12794

Review of the Methodology Proposed by the Food Safety and Inspection Service for Followup Surveillance of In-Commerce Businesses: A Letter Report

The Food Safety and Inspection Service of the U.S. Department of Agriculture is the federal agency responsible for enforcing the regulatory statutes applicable to meat, poultry, and egg products. The goal of the regulations is to ensure that the products are wholesome and safe for human consumption. This letter report, produced at the request of the Food Safety and Inspection Service, reviews new methods the agency has proposed to organize regulation and inspection of commercial facilities. The report concludes that a risk-based approach for surveillance activities is appropriate and commends the Food Safety Inspection Service for its efforts. The report contains several recommendations for the agency to consider for improving surveillance.

http://www.nap.edu/catalog.php?record_id=12786

Technical Peer Review of a Proposed Risk Assessment Methodology on Alaska’s Oil and Gas Infrastructure: September 2009 Letter Report

Transportation Research Board (TRB) has released a letter report produced by the Committee on Alaska’s Oil and Gas Infrastructure: Risk Assessment Peer Review that examines a contract team’s proposed risk assessment of Alaska’s oil and gas infrastructure designed to identify, quantify, and evaluate current and future significant risks from a systems-level perspective. According to the committee, the management plan is not feasible given real-world constraints, the proposed risk methods are too detailed and lack a sufficient top-down perspective necessary for capturing important risks, and the proposed outputs are static and stop well short of providing Alaska with tools capable of evaluating risk mitigation opportunities. In addition, the committee recommends that the methodology should be redesigned to ensure a rigorous, well-balanced assessment that will address the issues of most concern to the state.

http://onlinepubs.trb.org/onlinepubs/reports/AlaskaRiskAssessment_Oct_2009.pdf

NEW PROJECTS

Evaluation of Chesapeake Bay Program Implementation for Nutrient Reduction to Improve Water Quality

The National Research Council (NRC) proposes to evaluate and provide advice on Chesapeake Bay Program (CBP) nutrient reduction efforts. To carry out this work, the NRC

will appoint a multidisciplinary committee of experts that will provide advice to the U.S. Environmental Protection Agency, the six states in the Chesapeake Bay watershed, the District of Columbia, other federal agencies, and other interested parties. The committee will review the CBP, identify technical and strategic shortcomings, and recommend options for improving the effectiveness of its nutrient reduction program in order to accelerate reaching the overall goals to protect and restore the Chesapeake Bay.

<http://www8.nationalacademies.org/cp/ProjectView.aspx?key=DELS-WSTB-09-08>

UPCOMING MEETINGS

October

America's Climate Choices, October 27-28, 2009, Washington DC

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=3848>

National Earthquake Resilience - Research, Implementation, and Outreach, October 28-30, 2009, Chicago, IL

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=3771>

Providing Healthy and Safe Foods as We Age, October 29-30, 2009, Washington, DC

<http://iom.edu/CMS/3788/4598/70939.aspx>

November

Microbes and Health, November 2-3, 2009, Irvine, CA

http://www.nasonline.org/site/PageServer?pagename=Sackler_main

2009 Japan-America Frontiers of Engineering Symposium, November 9-11, 2009, Irvine, CA

<http://www.nae.edu/Programs/FOE/JAFOE/2009JAFOE.aspx>

Fifth Annual Meeting of the African Science Academy Development Initiative, Improving Maternal, Newborn, and Child Health in Sub-Saharan Africa, November 10-11 2009, Accra, Ghana

http://www.nationalacademies.org/asadi/2009_Conference/ASADI5-GhanaReg.html

Assessment of Water Reuse as an Approach for Meeting Future Water Supply Needs, October 11-13, 2009, Orlando FL

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=3844>

Developing a Research Agenda for Transportation Infrastructure Preservation and Renewal Conference, November 12-13, 2009, Washington, DC

<http://guest.cvent.com/EVENTS/Info/Summary.aspx?e=71a7d31d-5989-4cae-aa9a-3ee5e4a73b56>

Twenty-first Annual Kavli Frontiers of Science Symposium, November 12-14, 2009, Irvine, CA

http://www.nasonline.org/site/PageServer?pagename=FRONTIERS_usfos_2009program

Developments in Climate Change, November 19, 2009, Irvine, CA

http://www.nasonline.org/site/PageServer?pagename=Beckman_DV_Fall2009

December

When the Mountains Come to You, December 2, 2009, Irvine, CA

http://www.nasonline.org/site/PageServer?pagename=Beckman_DV_Fall2009

Independent Scientific Review of Everglades Restoration Progress, December 3-4, 2009, TBD

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=3408>

Evolution and the Future of the Earth, December 10, 2009, Irvine, CA

http://www.nasonline.org/site/PageServer?pagename=Beckman_DV_Fall2009

Review of the FreedomCAR and Fuel Research and Development Partnership, Phase 3, December 10-11, 2009, Washington, DC

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=3796>

Evaluation of Chesapeake Bay Program Implementation for Nutrient Reduction to Improve Water Quality, December 16-17, 2009, Washington, DC

<http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=3894>

PROJECTS IN DEVELOPMENT

A Sustainability Challenge: Food Security for All

The National Academies' Roundtable on Science and Technology for Sustainability will convene two public workshops in 2010 to help establish the dimensions of the sustainability challenge and explore the risks and opportunities that will be involved if the world is to achieve sustainable global food security by 2050. A first workshop, *Measuring Food Insecurity and Assessing the Sustainability of Global Food Systems*, will examine the empirical basis for past trends, the current situation and projections for the future. A second workshop will discuss interactions between food security and natural resource management/climate change. Funding is currently being sought for this project.

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

Trends, Challenges, and Pathways to Urban Sustainability

The National Academies will organize an international symposium in summer 2010 on the challenges and opportunities of finding ways to meet the needs of an increasingly urbanized world while sustaining critical resources and natural systems for future generations. The symposium will bring together city managers and planners, urban researchers from government and academia, and leaders from the donor and finance communities. Participants will share lessons learned and discuss how to mobilize their collective knowledge on what works and why, so that this century's urban areas will become substantially more sustainable than existing cities are today, and so that urban impacts on global sustainability are recognized and minimized. This symposium will also attempt to build on existing initiatives, with an eye towards connecting and learning from these isolated activities, and catalyzing additional resources and partners to engage in this critically important issue. Cities are complex systems, and fostering sustainable urban areas requires an integrated, cross-sectoral, and multi-disciplinary approach; the proposed effort would be a promising first step along that path. Funding is currently being sought for this project.

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

ONGOING ACTIVITIES

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>

From the October 2009 Issue:

Institutional Challenges for Mining and Sustainability in Peru

<http://www.pnas.org/content/106/41/17296.full>

Trade-offs and Synergies between Carbon Storage and Livelihood Benefits from Forest Commons

<http://www.pnas.org/content/106/42/17667.full>

To learn more about sustainability activities, both in the STS program and throughout the other boards and committees of the National Academies, please visit our webpage at:

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

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