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Policy News from NSC Alliance

Through the NSC Alliance partnership with the American Institute of Biological Sciences, we are pleased to provide NSC Alliance members with the following public policy update. If you have any questions or require additional information regarding any of the following items, please contact NSC Alliance director of public policy Dr. Robert Gropp at 202-628-1500 x 250 or at rgropp@aibs.org.

Presidential Candidates Answer Top Science Policy Questions

Science and technology are increasingly central to societal and economic development. Despite the importance of science in national policy, it is a topic that is rarely addressed by political candidates. In an effort to raise the visibility of science in the presidential campaigns, ScienceDebate.org posed 14 questions about science policy to President Barack Obama and Governor Mitt Romney.

Both candidates recognized the importance of science, technology, engineering, and mathematics (STEM) for U.S. economic growth, but put forth different proposals to ensure America's continued leadership in these areas. Obama proposed doubling funding to key research agencies, and set the goal of preparing 100,000 STEM teachers over the next decade. Romney stated innovation in the private sector was critical, and would flourish with more access to human capital, simpler tax codes, less regulation, and more protection of intellectual property. He indicated a role for government in supporting the private sector by making higher education more affordable, and K-12 more accountable to parental choice and government standards.

The candidates stated they would support federal science funding, although Romney emphasized the importance of research commercialization and the private sector. Obama pointed to the American Recovery and Reinvestment Act (i.e. the stimulus) as an example of his administration's commitment to science: "\$100 billion to support groundbreaking innovation with investments in energy, basic research, education and training, advanced vehicle technology,

health IT and health research, high speed rail, smart grid, and information technology. Of these funds, we made a \$90 billion investment in clean energy that will produce as much as \$150 billion in clean energy projects.” Romney dismissed the effectiveness of the Obama administration investments in clean energy. Both candidates argued that they would make the research and development tax credit permanent.

Both candidates acknowledged human-caused climate change and its global nature. Despite previously declaring his doubts about society’s role in rising global temperatures, Romney stated “I am not a scientist myself, but my best assessment of the data is that the world is getting warmer, that human activity contributes to that warming, and that policymakers should therefore consider the risk of negative consequences.” He went on to declare a “lack of scientific consensus” regarding the extent and consequences of climate change, and criticized action by the United States on climate change on the grounds that it limited the development of U.S. industry or pushed industry to move outside of U.S. borders, without producing tangible benefits. Romney advocated a “No Regrets” policy: taking steps that lead to lower emissions, but that benefit the U.S. “regardless of whether the risks of global warming materialize and regardless of whether other nations take effective action.”

Obama made no mention of cap-and-trade or other binding international agreements. Rather he focused on what his administration has done to address climate change, including “historic standards limiting greenhouse gas emissions from our vehicles,” “unprecedented investments in clean energy,” and the proposed “first-ever carbon pollution limits for new fossil-fuel-fired power plants and reduced carbon emissions.” He supported a continuing role for the U.S. in international agreements on emission limits, and emphasized development of clean energy, which includes coal and natural gas, as well as renewable resources such as solar and wind. With respect to the use of science in public policy, both candidates expressed a desire to incorporate scientific information into policymaking with transparency and without ideological manipulation. Romney additionally stated he would pursue “reforms to ensure that regulators are always taking cost into account when they promulgate new rules.”

Obama and Romney had divergent takes on the role of federal government in preparing students in STEM fields. Obama emphasized government initiatives, in line with his “Educate to Innovate” campaign, which aims to bring together businesses, foundations, non-profits, and professional societies to improve STEM teaching and learning. He mentioned his plan for a national STEM Master Teacher Corps that would eventually support 10,000 of the best STEM teachers in the nation. In contrast, Romney said more spending would not solve the problem of K-12 education, and instead emphasized the need to reduce the power of teacher unions, increase school and teacher accountability, implement rewards and recruitment for effective teachers, and broaden parental choice.

The candidates also differed in their views on how to address society’s need for accessible fresh water, which is increasingly at risk due to consumption, evaporation, and pollution. Obama expressed a commitment to addressing the water crisis. His administration has awarded grants for water conservation projects and funded 5,100 water and wastewater community infrastructure projects. Romney contended that costly and inflexible regulation impose “unnecessary economic constraints and trigger inevitable litigation. The result is to delay progress that could be

achieved, and to leave communities and natural resources worse instead of better off.” He proposed to modernize regulations, and renew focus on research into U.S. drinking and sanitation infrastructure through a combination of “incentives, market-based programs, and cooperative conservation measures.”

The candidates additionally responded to questions on pandemics and bio-security, energy, food, the Internet, ocean health, space, natural resources, and vaccination and public health. The questions were identified by the public and refined to 14 by a group of scientific organizations. The complete list of questions and candidate responses can be found at <http://www.sciencedebate.org/debate12>.

Impending Budget Cuts to Science Detailed in New Report

The American Institute of Biological Sciences has produced a [report](#) that explains the fiscal cliff, budget sequestration, and other forthcoming fiscal problems that have the potential to negatively impact federal investments in research and science education.

Under current law, \$6.8 trillion in deficit reduction will occur over the next decade through increased taxes and spending cuts. The increasingly discussed ‘fiscal cliff’ refers to this abrupt and significant change to the federal budget that will occur in January 2013. If Congress and the President fail to reach an agreement to forestall the fiscal cliff, government spending will automatically be cut in January, and tax rates will rise for many Americans.

One aspect of the fiscal cliff that is of particular concern is \$1.2 trillion in defense and non-defense spending reductions set to occur over the next decade. This budget sequestration will start in 2013. Non-defense agencies, including the National Science Foundation, National Institutes of Health, Department of the Interior, and others, will lose about 8.2 percent of their funding next year. Defense programs, including various research and development programs, will be subject to a 9.4 percent reduction. These cuts will likely cause layoffs of federal employees, cuts to external grants and contracts, and reduced government services.

Download a free copy of the report to learn more: http://www.aibs.org/public-policy/resources/AIBS_Sequestration_Report.pdf.

Act Now: Urge Congress to Prevent Devastating Budget Cuts

It is not too late to urge Congress to avoid the forthcoming \$1.2 billion budget sequestration. This automatic spending cut would have dramatic negative impacts on U.S. domestic programs, including science and education.

Without action by lawmakers, all discretionary research, education, and environmental programs will be cut by at least 8 percent in January 2013.

Please take a minute now to send a letter to your members of Congress asking them to devise a bipartisan solution to addressing the nation's debt crisis and avoid draconian cuts that will hurt the economy and the nation's future. Visit <http://capwiz.com/aibs/issues/alert/?alertid=61759666> to send a prepared letter.

Deadline Approaching for Digitization Grants

The National Science Foundation is accepting proposals for the Advancing Digitization of Biodiversity Collections program. This initiative seeks to enhance and expand the national resource of digital data documenting existing vouchered biological and paleontological collections and to advance scientific knowledge by improving access to digitized information residing in vouchered scientific collections across the United States. The full proposal deadline is 19 October 2012. More information is available at http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503559&WT.mc_id=USNSF_39&WT.mc_ev=click.

USGS Coalition Honors Representatives LaTourette, McCollum

On Wednesday, 12 September 2012, the USGS Coalition honored Representatives Steven LaTourette (R-OH) and Betty McCollum (D-MN) with the Coalition's 2012 Leadership Award. The awards were presented during the USGS Coalition's annual reception on Capitol Hill. The NSC Alliance is a member of the USGS Coalition.

In addition to remarks by both Representatives, two senior Interior officials spoke. Lori Caramanian is the deputy assistant secretary for water and science at the Department of the Interior. Suzette Kimball, deputy director of the USGS, thanked the Representatives and the USGS Coalition for the years of effort they have given to elevating the profile of the USGS among policymakers.

"We are pleased to recognize Representatives LaTourette and McCollum for their sustained efforts to champion the scientific programs of the United States Geological Survey. Their leadership in Congress has helped increase awareness of the USGS," stated Dr. Gropp. "Representatives McCollum and LaTourette clearly understand that USGS research in biology, geology, water and geography provides the American people with vitally important information every day. USGS research and information contribute to economic growth, improve the public health and safety, and enhance our ability to wisely manage our natural resources."

Congressman LaTourette is serving his ninth term in the U.S. House of Representatives and represents Northeast Ohio's 14th Congressional District. He serves on the House Appropriations Subcommittee on Interior, Environment, and Related Agencies, which oversees funding for the USGS and other Department of Interior programs. As a member of the subcommittee, LaTourette plays an important role in ensuring that the USGS has the resources it needs to provide the department and the nation with the scientific information required to make informed decisions. He emphasizes effective use of tax dollars in the management of these natural and

cultural resources with a keen understanding that these resources also enhance economic development.

“I’m flattered by the award. I truly believe the only way we can protect our country’s greatest natural resources is to understand them better. It’s one of the reasons I’m such a huge fan of the USGS work and have been a proud supporter of it for these past 18 years in Congress,” states Congressman LaTourette.

Representative McCollum is serving her sixth term in the U.S. House of Representatives, representing Minnesota’s 4th District. In 2000, Congresswoman McCollum made history as the second Minnesota woman elected to serve in Congress since statehood in 1858. She serves on the House Appropriations Subcommittee on Interior, Environment, and Related Agencies, which oversees funding for the USGS. Her strong support of USGS science to manage natural resources and improve clean energy technologies emphasizes her commitment to environmental stewardship and global economic competitiveness.

Representative McCollum attests, “It is an honor to be recognized by the U.S. Geological Survey Coalition for the work we do together to wisely manage America’s natural resources so that we can improve public health and grow our economy. Communities and businesses across our country rely on the scientific information USGS provides to make informed decisions. I will continue working with my Republican and Democratic colleagues in Congress to ensure USGS has the resources it needs to serve the American people.”

For more information about the USGS Coalition, please visit www.usgscoalition.org.

College Biology Faculty Named Leadership Fellows

The Partnership for Undergraduate Life Sciences Education (PULSE) program announced on 7 September 2012 that it has selected 40 Vision and Change Leadership Fellows. The fellows will identify and consider how to eliminate barriers to the systemic changes that are needed to improve undergraduate life sciences education.

The PULSE program is a joint initiative of the National Science Foundation (NSF), Howard Hughes Medical Institute (HHMI), and the National Institutes of Health (NIH). The effort is supporting a yearlong program in which Vision and Change Leadership Fellows consider and then recommend models for improving undergraduate life sciences education.

“The fellows represent a diverse group of extremely capable faculty,” said Judith Verbeke of NSF. “They bring a variety of experiences that will inform the development of an implementation framework that will transform undergraduate education in the life sciences.”

These post-secondary life sciences faculty members were competitively selected by an expert panel for their experience in catalyzing reform in undergraduate biology education.

After evaluating more than 250 applications, the PULSE steering committee selected the fellows.

These individuals come from 24 states and the U.S. Virgin Islands, and represent research universities, liberal arts colleges, comprehensive/regional universities, and two-year colleges.

“We are very excited about the work on which the fellows are about to embark,” said Clifton A. Poodry of NIH’s National Institute of General Medical Sciences. “The PULSE program will help move life sciences education forward.”

“The strong response we received to the call for applications reflects broad consensus in the community that change is needed,” said HHMI’s Cynthia Bauerle. The way biology is taught needs to change in order to spark student interest in science and prepare them to answer challenging 21st century problems. “The time is now,” said Bauerle.

In 2006, NSF initiated a multi-year conversation with the scientific community, with assistance from the American Association for the Advancement of Science. That dialogue, which was co-funded by NIH and HHMI, generated the 2011 report, *Vision and Change in Undergraduate Biology Education: A Call to Action*.

The scientific community actively informed the recommendations in the *Vision and Change* report. Among these were a recognition that a 21st century education requires changes to how biology is taught, how academic departments support faculty, and how curricular decisions are made.

“To foster this widespread systemic change, NSF, HHMI, and NIH launched the PULSE program,” said Verbeke. Supporting the effort are Knowinnovation, Inc. and the American Institute of Biological Sciences.

PULSE will stimulate systemic change in undergraduate life science education by focusing on strategies that drive institutional change. Because a change in institutional culture is needed, PULSE activities are focused on academic departments and not individual faculty members.

In May, PULSE announced a national competition to identify Vision and Change Leadership Fellows. The 40 fellows announced will produce an implementation framework describing strategies for change. This document will be available on the PULSE website where other life scientists may review it and provide comments from November 2012 until May 2013. The biology community is encouraged to review and enrich this framework via the PULSE online colleague community. Program organizers stress that they welcome the participation of the breadth of the post-secondary life sciences community.

A list of the Vision and Change Leadership Fellows is available at www.pulsecommunity.org/forum/topics/announcement-v-c-leadership-fellows. Learn more about PULSE or engage with the growing online PULSE community at www.pulsecommunity.org.

USGS Nears Completion of Topo Maps Series

Digital topographic maps for all of the lower 48 states are now available online. The maps feature new additions, including natural features like rivers and Forest Service boundaries. The data are provided by the U.S. Geological Survey as part of the national map series. The recent addition of maps for Florida and Illinois mean that nearly 54,000 Topo maps are now available. The maps are available for free download from [The National Map](#) and the USGS Map Store [website](#).

New Blog Explores DNA Barcoding

DNA Barcoding is the name and the subject of a new blog by researcher Dirk Steinke, of the Canadian Centre for DNA Barcoding. The blog provides examples of the usefulness of DNA barcoding, such as distinguishing between wild medicinal plants. A recent post also provides information about DNA barcoding standards. Access the blog at <http://dna-barcoding.blogspot.ca/>.

The Natural Science Collections Alliance is a Washington, D.C.-based nonprofit association that serves as an advocate for natural science collections, the institutions that preserve them, and the research and education that extend from them for the benefit of science, society, and stewardship of the environment. NSC Alliance members are part of an international community of museums, botanical gardens, herbariums, universities, and other institutions that house natural science collections and utilize them in research, exhibitions, academic and informal science education, and outreach activities. Website: www.NSCAlliance.org.

Note: You are receiving a copy of this electronic report as part of your membership in the NSC Alliance. Contact the Alliance office with any email address or member representative name changes send an email to spotter@aibs.org.