

**NATIONAL SCIENCE FOUNDATION
NATIONAL SCIENCE BOARD**

Wednesday, March 24, 2010

Opening Statement

Alan B. Mollohan, Chairman

Good morning; the hearing is called to order.

Welcome to the fiscal year 2011 NSF budget overview hearing of the Subcommittee on Commerce, Justice, and Science. Today, we will cover the budget and operations of the National Science Foundation (NSF) and the National Science Board and also review the status and future needs of U.S. science activities other than those in human health. Our witness is the Director of the National Science Foundation, Dr. Arden Bement.

Dr. Bement, I believe this is your valedictory appearance before this Subcommittee, and I want to begin by thanking you for your service to American science and technology and to the people of the United States. I think you are leaving NSF well-staffed with science leaders. You have succeeded in efforts to bring forward major cross-cutting initiatives, achieving cooperation across the different science directorates and between the education and human resources directorate and the science, technology, engineering, and math programs.

Based on considerable evidence, real growth in the U.S. economy in excess of population growth is primarily the result of the innovations and new technologies that result from public and private investments in research and development. Accordingly, we are in the midst of a ten-year doubling in funding

for NSF, contemplated by the America Competes Act. This doubling was accelerated by \$3 billion added to the fiscal year 2009 appropriation for the Foundation as part of the American Recovery and Reinvestment Act. Those funds have gone to increase grant funding across all areas of NSF and to various science infrastructure investments. The budget request for fiscal year 2011 continues the planned doubling with a roughly seven per cent increase over 2010 enacted levels.

In fiscal year 2010, this Subcommittee supported an increase to NSF education programs focused on hands-on, inquiry-based instruction in grades K through 12 and in K through 12 teacher preparation. Last month, we heard testimony from those who work in this area, and they provided examples of successful efforts at improving science, technology, engineering, and math (STEM) education. Those witnesses offered evidence of the benefits that result from federal investments made through NSF. NSF has a major role to play in continuing and accelerating the reform of science education to include inquiry and student assessments of inquiry skills.

In addition, NSF plays a growing role in climate observations and research. Under the major research equipment and facilities construction account, the request to initiate the National Ecological Observatory Network or NEON and to provide major funding for the Ocean Observatories Initiative should result in new understanding of how ecosystems and the oceans influence and respond to climate change. These research networks, along with the NSF grants for critical zone observatories, new research in hydrology, and a new supercomputer at the National Center for Atmospheric Research, have the potential to support climate understanding and predictions that are both more accurate and finer in spatial

resolution. These improvements will be needed to assist the private and public sectors in choosing climate change adaptation strategies and investments.

NSF is involved in so many exciting areas of research, including math, genomics, computer science, and engineering – I could go on, but this breadth of activity is the unique mission of NSF. While NSF and the mission agencies support R&D addressing changing national priorities, it is NSF's unique responsibility to ensure that the U.S. has continuing expertise across all areas of science and technology. This provides our Nation with the ability to address rapidly new challenges as they arise.

Given the critical role of science and technology in the future prosperity and international leadership of the United States, we look forward to hearing from you Dr. Bement on the state of U.S. science and technology and its future needs and prospects.

Following the opening statement of Ranking Member Wolf, we will ask you to provide a summary of your written testimony, which will be included in the hearing record, and then we will go to questions from Subcommittee members.