

AAAS in 2007 continued its 30-year tradition of providing objective, non-partisan analysis to guide federal investments in basic and applied research. The Association also expanded efforts to inform policy-makers on science and technology issues — from stem cell research to climate change — through Capitol Hill briefings and other events. Since 1973, meanwhile, more than 2,000 alumni of the AAAS Science and Technology Policy Fellowships program have played increasingly significant roles in shaping science policy.



Science Policy and Society

► RALLYING FOR R&D FUNDING

Analysis by the AAAS R&D Budget and Policy Program, a leading non-partisan authority on U.S. research and development (R&D) funding trends, again in 2007 warned of mixed prospects for government support of science and technology. Program Director Kei Koizumi said that proposed increases to the federal R&D portfolio for FY 2008 would be consumed by the development of weapons systems and space vehicles. Further, he predicted in February that overall federal investment in basic and applied research would fall, although research funding linked to the American Competitiveness Initiative (ACI) would increase at the National Science Foundation, the U.S. Department of Energy's Office of Science, and the National Institute of Standards and Technology laboratories in the U.S. Department of Commerce.

AAAS continued all year to push for a balanced R&D portfolio, through letters to lawmakers, testimony, and events. But by the year's end, Koizumi noted, the adjusted proposal for 2008 federal R&D funding called for just \$57.5 billion in support — an increase of only 1.1 percent — less than inflation, and substantially less than earlier congressional proposals. Federal research investment has declined, in real terms, since 2005, he said. AAAS responded by ramping up efforts to raise awareness of the need for robust R&D funding. Log onto www.aaas.org/spp/rd.

► INCREASING EFFORTS ON CAPITOL HILL

The AAAS CEO testified twice on U.S. R&D funding needs in 2007, and AAAS sent dozens of letters to policy-makers — from calling for increased federal funding for embryonic stem cell research, to supporting national standards for science and mathematics education. The Association's Board of Directors also issued statements of caution related to global climate change as well as the need for Earth observation satellites.

Two AAAS advisory units — the Center for Science, Technology, and Congress (CSTC), directed by Joanne Padrón Carney, and the Center for Science, Technology, and Security Policy (CSTSP), headed by Public Welfare Medalist Norman P. Neureiter — conducted nearly two-dozen technical briefings on Capitol Hill, on topics ranging from climate change and academic diversity, to food safety and nuclear disarmament. Carney and staff meanwhile also launched an online legislative tracker, and unveiled a comprehensive chart of eight different proposed climate-change bills. "Throughout much of its nearly 160-year history, AAAS has worked with Congress," said Albert H. Teich, director of AAAS Science and Policy Programs, "but it's never before had the kind of influence it does today." See www.aaas.org/spp.cstc.

► SCIENCE, SATELLITES, AND HUMAN RIGHTS

AAAS analysis of high-resolution satellite images pinpointed evidence consistent with village destruction, forced relocations, and a growing military presence across Burma, also known as Myanmar, where eyewitnesses reported human rights violations. AAAS had previously used the same technology to assess destruction in Darfur and Zimbabwe. The 2007 Burma project was supported by

The Open Society Institute and the John D. and Catherine T. MacArthur Foundation. Working with three human rights groups in Burma, researcher Lars Bromley mapped the location of 25 reported human rights violations. Increased engagement of scientists “is essential to securing human rights,” said Mona Younis, director of the AAAS Science and Human Rights Program, which dates to 1976. “We can’t allow another century to pass without seeing that promise realized.” Go to <http://shr.aaas.org/>.

► **SCIENCE SUPPORT FOR SCHOOL BOARDS**

AAAS and the National School Boards Association (NSBA), a federation of state associations of school boards representing 95,000 U.S. school board members, are working to help close the “urgency gap” — the disconnection between education and business leaders who see a critical need for improved science, mathematics, and technology education, and students and parents who may be unaware of the concerns. A three-year initiative, supported by a \$739,000 grant from the Ewing Marion Kauffman Foundation, the program debuted in April 2007 during the NSBA annual conference in San Francisco. Some 200 participants in a joint workshop discussed educators’ day-to-day needs for science-education support. In response, AAAS and the NSBA agreed to develop new training resources that can be tailored to reflect the specific needs of educators in different regions, said Peyton West, senior program associate with AAAS’s Dialogue on Science, Ethics, and Religion (DoSER) program.

AAAS “brings real clarity and a scientific approach to how science should be taught in public schools — and it’s not based on politics or ideology,” said Robin Krause, president of the Missouri School Boards Association. See www.smartschoolboards.org.

► **THE IMPACT OF POLICY FELLOWS**

Climate change, energy, and the environment were key concerns among the 161 AAAS Science and Technology Policy Fellows selected to work in U.S. executive branch agencies and congressional offices as part of the program’s 35th class in 2007 and 2008. Three Fellows — Jeremy Richardson, Holmes Hummel, and Alexander Barron — even headed to the United Nations Climate Change Conference in Bali, 3-14 December. Their participation in the historic climate-change summit reflected the growing influence of AAAS S&T Policy Fellows on science policy. Established in 1973, the AAAS

“If intimidation drives scientists from their valuable efforts and discourages young scientists from pursuing fields of inquiry that require the use of animals, medical progress will be seriously impeded. AAAS encourages scientists and the public to join in defending our colleagues whose freedom to conduct research is under attack.”

AAAS BOARD OF DIRECTORS STATEMENT, 28 NOVEMBER 2007

S&T Fellows program has placed thousands of scientists and engineers in key fields, from agriculture and atomic physics, to science education and defense technology, and many participants are now helping to drive science policy, academic research, and public discourse. Mark D. Drapeau, for instance, a Fellow at the National Defense University, published an op-ed in the *New York Times* in 2007, noting that “war and sickness are inextricably intertwined,” and calling for efforts to stop the flow of cholera and other microbial threats in regions such as Iraq. Other Fellows have assumed scientific leadership roles in the United States and abroad, Program Director Cynthia Robinson reported. See www.fellowships.aaas.org.

► **BIOETHICS AND GENE DOPING**

Athletes might someday try to alter their genes to increase muscle mass, rapidly recover from a sprint, or more efficiently use oxygen, speakers warned during a Capitol Hill briefing co-sponsored by AAAS and the Hastings Center. Such “gene doping” currently remains in the realm of science fiction. But “there will soon be companies peddling products for genetic doping, and people will buy them,” said Hastings Center President Tom Murray. Scientists, policy-makers, and the public thus need to openly discuss gene doping now — including its risks, and its implications for sports and society. Mark S. Frankel, director of the AAAS Program on Scientific Freedom, Responsibility, and Law, established in 1975, described the 22 October briefing as the first in a series of joint efforts to reach out to legislators, the media, and the public on an array of science and bioethics issues.