



*Albert H. Teich of AAAS (right) testified at a 2010 hearing before the U.S. House Subcommittee on Research and Science Education. The topic was The Science of Science and Innovation Policy, a National Science Foundation program for evaluating the impact of federal research investments.*

## SCIENCE POLICY AND SOCIETY

AAAS offers a diverse array of programs that serve as bridges, connecting science, government and our broader society. These provide influential fellowships in policy offices for highly qualified scientists and engineers, support high ethical standards in science and engineering, and leverage science in service of human rights. Policy-related efforts also enhance research competitiveness and improve communication on issues related to science, religion and the law.

### **Annual Forum Offers a U.S. Science Snapshot**

Top science and technology leaders at the 35th annual AAAS Forum on Science and Technology Policy described initiatives to address global challenges and drive economic growth. They also assessed how much science funding seen as “discretionary” may be cut in upcoming years because of the weak economy and massive federal deficits.

The Forum is considered the major U.S. public meeting on science and technology policy issues. It is attended by leading representatives from academia, industry, government and major scientific and engineering societies.

Past AAAS President John P. Holdren, director of the White House Office of Science and Technology Policy, said that energy is the biggest and most urgent science-related challenge of the century. “This is not energy and climate policy versus the economy,” Holdren said. “The costs of action are likely to be far smaller than the cost of inaction.”

Forum speakers also addressed topics such as climate change measures beyond reducing emissions, revamping the system of bringing new drugs and medical procedures to patients, national security, encouraging innovation in the manufacturing sector, strengthening scientific collaboration with Europe and U.S. policy on cyber-attacks.

### **Policy Fellows: Supporting Society**

In 2010, AAAS organized its largest class of Science and Technology Policy Fellows, with 210 scientists and engineers. Among them were an

HIV/AIDS researcher assigned to the National Institutes of Health, where she focused on the translation of genomics discoveries into new treatments, an area commonly known as personalized medicine, and a neuroscientist, who reported to the White House Office of Science and Technology. Meanwhile, a third fellow, who worked for Raytheon while also cultivating a passion for sharing the mysteries and mission of space exploration with the public, went to work at the U.S. Department of State, where his assignment includes a project about lunar settlement and exploration.

Also in 2010, a fellow and former fellows joined a USAID team in Haiti, where they helped assess water, sanitation and food needs after the earthquake. Another group of six fellows assigned to a multi-agency project on how the U.S. government can help prepare for climate change saw their report, which had been requested by President Barack Obama, released at the end of 2010.

The mission of the S&T Policy Fellowships, founded in 1973, is to send scientists and engineers to work in Congress or executive branch agencies and departments. Often providing valuable scientific expertise in their fellowship posts, many have stayed on in government or have gone on to leadership positions in education, private industry and non-governmental organizations.

As the class of 2010 heard at their orientation, the fellowships have significantly broadened the role scientists play in policy-making.

“I’ve seen the program elevate the role of science and technology across the board,” said Kerri-Ann Jones, a former fellow who is now the Assistant Secretary of Oceans and International Environmental and Scientific Affairs for the U.S. Department of State. “It’s become a real presence in the policy landscape.”

### Science and Human Rights

Satellite images analyzed by AAAS confirmed reports of attacks on Burmese villages, according to a report released in late 2010. The AAAS report cited 25 locations in the country’s Karen State and small areas of Shan State and adjacent Thailand, where the ruling junta has reportedly destroyed villages, raided food supplies and burned farms. AAAS staff worked with the U.S. Campaign for Burma, Amnesty International and other groups to provide the geospatial report.

AAAS began its pioneering use of geographical data and satellite photography in the support of human rights in 2006.

Another 2010 AAAS analysis of satellite images corroborated reports of burning, violence and displacement in mainly Uzbek neighborhoods in the city of Osh, Kyrgyzstan. The U.S. State Department and the United Nations have pledged money for humanitarian relief, reconstruction and community stabilization in the area of the ethnic clashes.

Meanwhile, the AAAS Science and Human Rights Coalition (SHRP) worked to promote Article 15 of the International Covenant on Economic, Social and Cultural Rights, which states that governments are obligated to uphold a universal right to the benefits of scientific progress. SHRP is building support for Article 15 by providing information about it and urging scientists to commit to it.

Also in 2010, SHRP addressed ethical dilemmas surrounding scientific research and the military, heard testimony from survivors of human rights violations and produced an online bibliography of materials on science and human rights and a starter kit for scientific groups exploring how to bring human rights issues to their organizations.

### Building Leadership in Science Policy

At the second AAAS-NSF Science of Science and Innovation Policy (SciSIP) workshop, researchers, policymakers and industry representatives worked together to facilitate communication and collaboration between their often divergent worlds. Among the aims of the workshop was contributing to better-informed and evidence-based decision-making by federal government officials. Policymakers who were invited to the workshop represented all of the major federal agencies engaged in science and technology as well as congressional staff, scientific and higher-education associations and the National Academies. Presentations examined research into the effectiveness of specific policies affecting scientific progress. An example was whether requiring foreign PhD-level science and engineering students to return home before they can obtain U.S. work visas results in their contributing more to their home countries.

Also in 2010, an executive training program cultivated leadership in science and technology policy. In this five-day workshop, a distillation of the Science and Technology Policy Fellowships orientation, experts from Capitol Hill and White House staff offices provided a brief education into the workings of S&T policy. The program is offered annually to a select audience.

### Research Integrity: Toward a Global Consensus

As part of a commitment to the international coordination of scientific norms, AAAS co-sponsored a conference at which more than 300 delegates from 51 countries developed a statement of research integrity recommendations.

The statement came out of conference discussions about such topics as codes of conduct for scientists, integrity training for new researchers, and the responsibility of editors and publishers to promote ethical standards. The one-page document lists 14 responsibilities for researchers, who face increasingly interconnected global challenges. Honesty, accountability, fairness and good stewardship of research on behalf of others were the main underlying principles outlined.



**AAAS Science & Technology Policy Fellows including Allegra da Silva contributed technical expertise in the wake of the devastating earthquake in Haiti.**

*Credit: Allegra da Silva*