



## SCIENCE POLICY

# Aided by Early Career Scientists, U.S. Plans for Climate Adaptation

In the summer of 2009, Ilya Fischhoff was in Kenya, studying zebras and their interactions with the predators, livestock, and people who share an environment that was, at the time, parched by drought. Within weeks after his return to the United States, Fischhoff was looking at adaptation from a new angle, contributing to a report on how the U.S. government can help the nation and other countries prepare for climate change.

The report, requested by President Barack Obama, for the first time offers recommendations to guide the federal government's climate change adaptation efforts. Fischhoff and five other AAAS Science & Technology Policy Fellows joined over 300 federal administrators and staff in the multi-agency effort, with much of their work focused on ensuring that scientific information is readily available to U.S., state, and local policy-makers and the public.

"People can make good decisions if they have scientific information that they trust and that is relevant," he said. "For that trust and relevance to be there, I think it is important for citizens and scientists to be partners. That way, we create knowledge that is useful and empowering to everyone."

The "Progress Report of the Interagency Climate Change Adaptation Task Force" was released 14 October, a year after the White House launched the effort. Based on the work of more than 20 federal agencies, and informed by 35 listening sessions and outreach events, the report reflects the growing awareness that while reducing greenhouse gases remains a priority, the nation must be ready as changes already evident in the climate increase and intensify (see the report at <http://go.usa.gov/CIP>).

As atmospheric concentrations of greenhouse gases have risen, the year-round average U.S. temperature has risen 2°F in the past 50 years. Wet areas of the country are expected to get wetter, and dry areas drier. "Climate change affects human health, water and energy supplies, food production, coastal



**Planning for change.** Lake Mead's "ring" reflects persistent drought in parts of the American West. A new federal report, with input from AAAS S&T Policy Fellows, says U.S. agencies should help policy-makers at every level adapt to long-term challenges that may be linked to climate change.

communities, [and] ecosystems," the report says. While future changes are difficult to predict, it adds, research indicates they "will be significant."

The task force is cochaired by Nancy Sutley, chair of the White House Council on Environmental Quality; Jane Lubchenco, administrator of the National Oceanic and Atmospheric Administration (NOAA); and Shere Abbott, associate director for environment in the White House Office of Science and Technology Policy (OSTP).

The AAAS Science & Technology Policy Fellowships, founded in 1973, offer early-through senior-career scientists and engineers positions in Congress or federal agencies. Fischhoff, for example, was assigned for 1 year to the U.S. Agency for International Development in the Executive Branch, and this fall began a congressional assignment.

Other Fellows who worked with the Task Force included: marine biologist Laura Petes and biologist Christine Jessup, both assigned to NOAA; sociologist Sabrina McCormick and ecologist Judsen Bruzgul at the Environmental Protection Agency; and neuroscientist Sarah Carter at OSTP. (After completing their Fellowships, Jessup is now at the National Institutes of Health, and Carter remains at OSTP.)

The Fellows contributed to various task force work groups, but all of them participated on the science work group, which focused on improving the integration of science into adaptation policy at every level. The science work group's recommendations were based in part on six listening sessions, some by conference call, during which state and local officials, transportation managers, and others located from Alaska to the Gulf Coast described their adaptation planning needs.

The group found that while adaptation planning has already begun in many locations across the United States, barriers still exist, Petes explained. Local and state leaders are looking to the federal government for technical support and guidance—and the flexibility to shape their own plans. "We need to improve access to science in order to help individuals and institutions make informed adaptation decisions," she said. "Given that most adaptation actions are local, preparing the nation for the impacts of climate change will require integrated approaches and partnerships."

Abbott, formerly the AAAS chief international officer, said a key task force recommendation is to "use the science we have today more effectively, even as we work to fill knowledge gaps." She praised the Fellows for bringing "energy, focus, and scientific rigor to the process."

"Planning for a changing climate requires access to scientific information that people can understand and use," said Lubchenco, who served as AAAS president in 1996. She thanked the Fellows for their contribution, adding: "We can expect to see these young people at the forefront of the ongoing effort to communicate best-available science to those who need it the most."

The task force will deliver another report to Obama in October 2011 to detail progress in implementing the recommendations.

## Middle East Scientists, AAAS Work for Greater Regional Collaboration

Science research and education thrive in innovative programs throughout the Middle East and North Africa, but these efforts are too often isolated and could benefit from stronger regional partnerships, experts said at two recent meetings held in Amman, Jordan, and organized by AAAS.

One conference discussed ways to identify and nurture math and science talent among pre-college students in the region, while the second conference promoted international collaboration in the biosciences. Despite their different subjects, the meetings shared a common theme: Researchers are eager to develop regional networks that will allow them to collaborate and compete globally.

The meetings fostered new working relationships between scientists, educators, and research institution administrators from different countries, a goal that has been hampered by a lack of funding and a sparse history of collaboration, participants said.

It was “immediately apparent how much open dialogue between regional and international scientists was effective in establishing new networks for scientists in areas of training and research,” said Saied Jaradat, director of the H.R.H. Princess Haya Biotechnology Center at the Jordan University of Science and Technology.

“We thought of joint research projects, site visit exchanges, sharing some data, and working together as a team,” said Abdullah Aljughaiman, director of Saudi Arabia’s

National Research Center for Giftedness and Creativity, who attended the talent conference. “These actions would help all of us to better achieve our goals and better use our resources.”

The meetings represent the most recent efforts by AAAS in its engagement in the Middle East and Northern Africa region. In early 2007, AAAS helped organize a landmark meeting in Kuwait that brought 200 women scientists and engineers from the Arab world together with U.S. women who were leaders in science, business, education, and government. Norman P. Neureiter, while director of the AAAS Center for Science, Technology, and Security Policy, was part of a high-level delegation of scientists and engineers that visited Iran later that year. And in 2009, top AAAS officials joined a small, high-level delegation that visited Syria and met with President Bashar al-Assad and others for discussions focused on science, education, and development.

Neureiter, now a senior adviser at the center, spoke at the 27 to 29 September talent meeting in Amman with conference director Florence Fasanelli, associate program director in Education and Human Resources at AAAS. “The spontaneous interaction among people who work with gifted young people in the region, most of whom had not known each other before, was really inspiring,” he said.

The talent conference, co-organized by AAAS and Jordan’s Royal Scientific Society with support from the John Templeton Foundation, included more than 90 scientists and policy-makers from 17 countries. They discussed math and science enrichment programs, entry into the International Mathematics Olympiad, and barriers to identifying gifted youth in the region.

“Our goal must be to captivate talent and to nurture entrepreneurship, inquiry and skill,” said Her Royal Highness Princess Sumaya bint El Hassan of Jordan, in her



**Commitment to excellence.** Her Royal Highness Princess Sumaya bint El Hassan of Jordan said the region must do more to prepare its young scientists for the global knowledge economy.

opening speech at the conference. “We must offer our young scientists nothing less than the complete nurturing environment that they deserve.”

The 2 to 6 October biosciences meeting was cohosted by Jaradat and Gerald Epstein, director of the AAAS Center for Science, Technology and Security Policy. It drew more than 60 researchers, university administrators, and laboratory heads from 15 countries. The conference, sponsored by the U.S. Department of State, was organized in part by Kavita Berger, the center’s associate program director; and Gwenaële Coat, a senior program associate. Joanne Carney, director of the AAAS Center for Science, Technology and Congress, spoke in a session on communicating with policy-makers.

In far-ranging talks about research standards, private-public research partnerships, and infectious disease projects, the participants identified a number of barriers to international and regional collaboration. Among them: disparate government investment, bureaucratic obstacles, and different regulatory environments. AAAS will hold three additional meetings in the region to expand on the themes emerging from the conference, Epstein said.

“Even within institutions in the region, there isn’t much history of collaboration,” Epstein noted. “But if internal and regional partnerships can be created, these institutions would be better positioned to collaborate internationally.”

—Becky Ham

### 2010 ELECTION

#### A Call for Nominations

AAAS members may suggest nominees (including themselves) for president-elect and the Board of Directors for election in the fall of 2011. For a list of this year’s candidates, see AAAS News & Notes in the 29 October 2010 issue of *Science*; for a list of current Board members, go to [www.aaas.org/aboutaaas/organization/board.shtml](http://www.aaas.org/aboutaaas/organization/board.shtml). Please send the suggested nominee’s curriculum vitae no later than 15 May 2011 to Gretchen Seiler, AAAS Executive Office, 1200 New York Ave., N.W., Washington, D.C., 20005. Suggested nominees will be considered by the AAAS Committee on Nominations at its winter meeting.

## SUSTAINABLE DEVELOPMENT

### Romain Murenzi to Head Sustainability Center

Romain Murenzi, a Rwandan physicist who helped shape his nation's acclaimed science-for-development strategy, has joined the AAAS International Office as director of the Center for Science, Technology, and Sustainable Development.

The center should be a hub where developing nations, scientists, and development agencies and banks come together, Murenzi said in an interview. That could make it a catalyst that helps marshal science, engineering, and technology to address challenges ranging from hunger and a lack of drinking water to science education and environmental threats.

"Science cooperation with the developing world is a central element of AAAS's mission, and in Romain Murenzi, we have an accomplished leader," said Alan I. Leshner, chief executive officer of AAAS and executive publisher of *Science*. "He has a vision for how science and technology can help build even the poorest nations—a vision informed by his experience as a scientist, teacher, and policy-maker. We believe he will have a tremendous impact."



Romain Murenzi

Murenzi traveled a remarkable route to AAAS. He was born in Rwanda and taught math in the neighboring nation of Burundi. After receiving his Ph.D. in physics at the Catholic University of Louvain in Belgium, he joined the faculty at Clark Atlanta University in Georgia. In 1999, he became chair of the Physics Department.

In 2001, he returned to Rwanda to join President Paul Kagame's efforts to help the impoverished nation recover from a 1994 genocide that left some 800,000 people dead, mainly ethnic Tutsis, as well as politically moderate Hutus.

Kagame saw science and technology as drivers of human and economic development. With Murenzi in ministerial posts overseeing education, scientific research, and communication technology, Rwanda made dramatic strides in school enrollment, health care, food production, and wireless and fiberoptic networks. Today, it is a key center in Africa's increasingly vibrant economy.

Find a podcast with Romain Murenzi at [www.aaas.org/go/murenzi](http://www.aaas.org/go/murenzi).

## COMMUNICATION

### Winners Named in AAAS Kavli Science Journalism Awards

Probing environmental reports and intriguing memory studies were among the 2010 winners of the prestigious AAAS Kavli Science Journalism Awards.

**Large Newspaper—(Circulation  $\geq 100,000$ ):** Charles Duhigg, *The New York Times*, for "Toxic Waters," 17 December 2009, 13 September 2009, and 23 August 2009.

**Small Newspaper—(Circulation  $< 100,000$ ):** Hillary Rosner, *High Country News*, for "One Tough Sucker," 7 June 2010.

**Magazine:** Steve Silberman, *Wired*, for "The Placebo Problem," September 2009.

**Television—(Spot News/Feature Reporting,  $\leq 20$  minutes):** Sarah Holt, NOVA scienceNOW, for "How Memory Works," 25 August 2009.

**Spot News Certificate of Merit:** Vince Patton, Nick Fisher, Michael Bendixen and Todd Sonflieth, Oregon Public Broadcasting, for "Murre and Eagles" and "Pygmy Owls," 4 February 2010 and 18 February 2010.

**Television—(In-Depth Reporting,  $> 20$  minutes):** Alan Alda, Graham Chedd, Larry Engel, and Jared Lipworth, THIRTEEN, in association with WNET.ORG, for "The Human Spark," 6, 13, and 20 January 2010.

**Radio:** Richard Harris and Alison Richards, NPR, for "Follow the Science: Calculating the Amount of Oil and Gas in the Gulf Oil Spill," 14, 20, and 28 May 2010.

**Radio Certificate of Merit:** Gabriel Spitzer, WBEZ, for "Researchers Probe How Music Rewires the Brain," 10 September 2009.

**Online:** William Saletan, Slate, for "The Memory Doctor," 4 June 2010.

**Children's science news:** Cody Crane, *Science World* (Scholastic), for "Learning from Bears," "Real-Life Bloodsuckers," and "Saving the Ozone Layer," 1 February 2010; 26 October 2009; and 7 September 2009.

The awards, administered by AAAS since their inception in 1945, go to professional journalists for distinguished reporting for a general audience. The Kavli Foundation, based in Oxnard, California, provided a generous endowment for the program in 2009.

Independent panels of science journalists pick the winners, who will receive \$3000 and a plaque at the 2011 AAAS Annual Meeting in Washington, D.C.

—Earl Lane

## SCIENCE & DIPLOMACY

### Neureiter Awarded Japan's Order of the Rising Sun

Norman P. Neureiter, the first director of the AAAS Center for Science, Technology and Security Policy, has received one of the highest honors awarded by the Japanese government, for his career contributions to science and technology cooperation between Japan and the United States.

Neureiter, now a senior adviser to the AAAS Center, accepted the Order of the Rising Sun, Gold and Silver Star decoration in a ceremony at the Imperial Palace in Tokyo on 5 November 2010. The investiture ceremony was followed by a reception with Emperor Akihito.

"We are delighted that Japan has seen fit to honor Dr. Neureiter's global science leadership in this very prestigious way," said Alan I. Leshner, chief executive officer of AAAS and executive publisher of *Science*. "He is a fine colleague who leads both intellectually and through his own extensive international activities."

Neureiter started working with Japan in 1963, when he became the first permanent U.S. program director for the U.S.–Japan



Norman Neureiter

Cooperative Science Program that was initiated under President John F. Kennedy. From 1989 to 1994, he lived in Tokyo and served as vice president of Texas Instruments Asia.

In 1994, Neureiter was asked by the White House Office of Science and Technology Policy to chair the U.S. side of an advisory committee established under the U.S.–Japan Science Cooperation Agreement. He served as U.S. cochair of that committee, the Joint High-Level Advisory Panel, until 2000.

Neureiter said the award ceremony and reception gave him and his wife, Georgine, "a poignant sense of the rich historical traditions of Japan, while recognizing at the same time Japan's own unique contributions to cutting-edge science and technology."

Neureiter, who speaks Japanese, visits Japan at least once a year for professional activities. In October, he spoke about science diplomacy at the 50th anniversary celebration of the U.S. National Science Foundation's Tokyo office.

—Earl Lane

# Science

## AAAS News and Notes

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