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Connecting the Scientific and Policy Communities

*Fellowships and the Role of AAAS in
Developing S&T Policy Capabilities*

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*Director for International Cooperation
Deputy Director, Center for Science Diplomacy
(2004 Diplomacy)*

www.aaas.org

American Association for the Advancement of Science (AAAS)

- Founded in 1848
 - Started with 87 members
 - The goal of the society was to promote scientific dialogue in order to allow for greater scientific collaboration
- Mission: To advance science, engineering, and innovation throughout the world for the benefit of all people
 - Advancing science, serving society

Adopted by the AAAS Board, August 2007

AAAS Strategic Goals

- Enhance communication among scientists, engineers, and the public
- Promote and defend the integrity of science and its use
- Strengthen support for the science and technology enterprise
- Provide a voice for science on societal issues
- Promote the responsible use of science in public policy
- Strengthen and diversify the science and technology workforce
- Foster education in science and technology for everyone
- Increase public engagement with science and technology
- Advance international cooperation in science

Adopted by the AAAS Board, August 2007

AAAS is a House with 3 Rooms

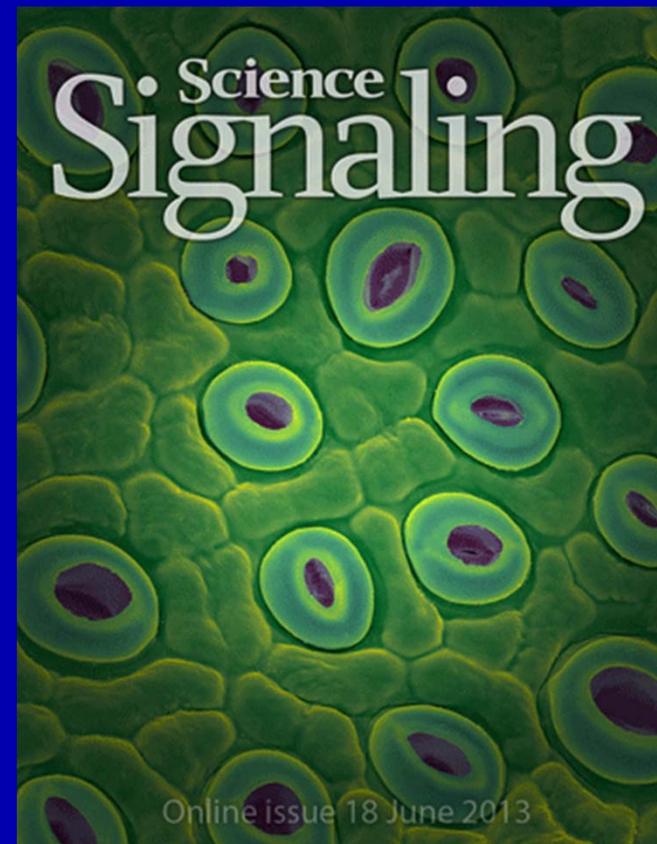
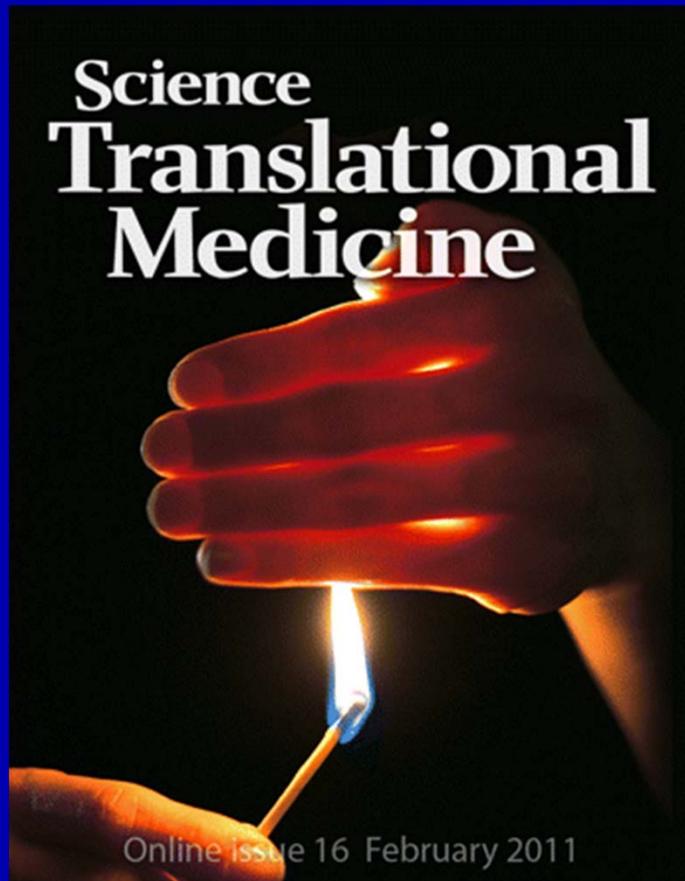
- Room 1: Governance and membership – over 120,000 members world wide
 - Governance (elections of fellows, and board)
 - Distinguished Past Presidents include Nobel Prize Winners, Heads of Agencies and The Science Adviser to the President of the United States
 - Annual meeting of the membership (and others) focuses on issues at the interface of science and society

Room 2: Publisher



Founded by Thomas Edison in 1880

T. Wang, AAAS



Room 3

- Program Activities in
 - Science Policy
 - Science Education
 - Public Engagement
 - Security
 - International

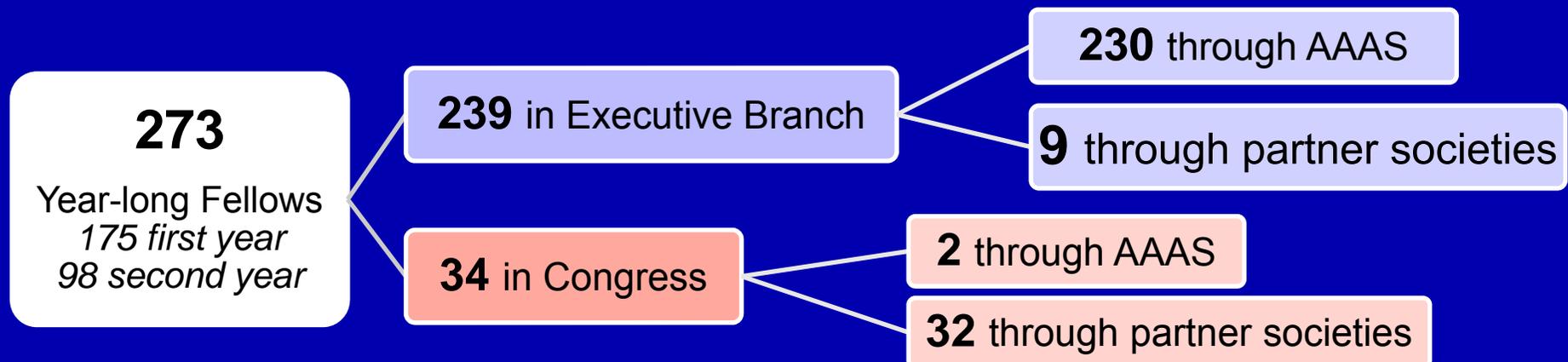
AAAS Program Activities (Policy)

- Policy Fellowships for Scientists and Engineers
- R&D Budget Analysis
- Science and Human Rights
- Scientific Freedom, Responsibility and the Law
- Research Competitiveness Service
- Center for Science, Technology and the Congress
- Center for Science, Technology and Security Policy
- Center for Science Diplomacy

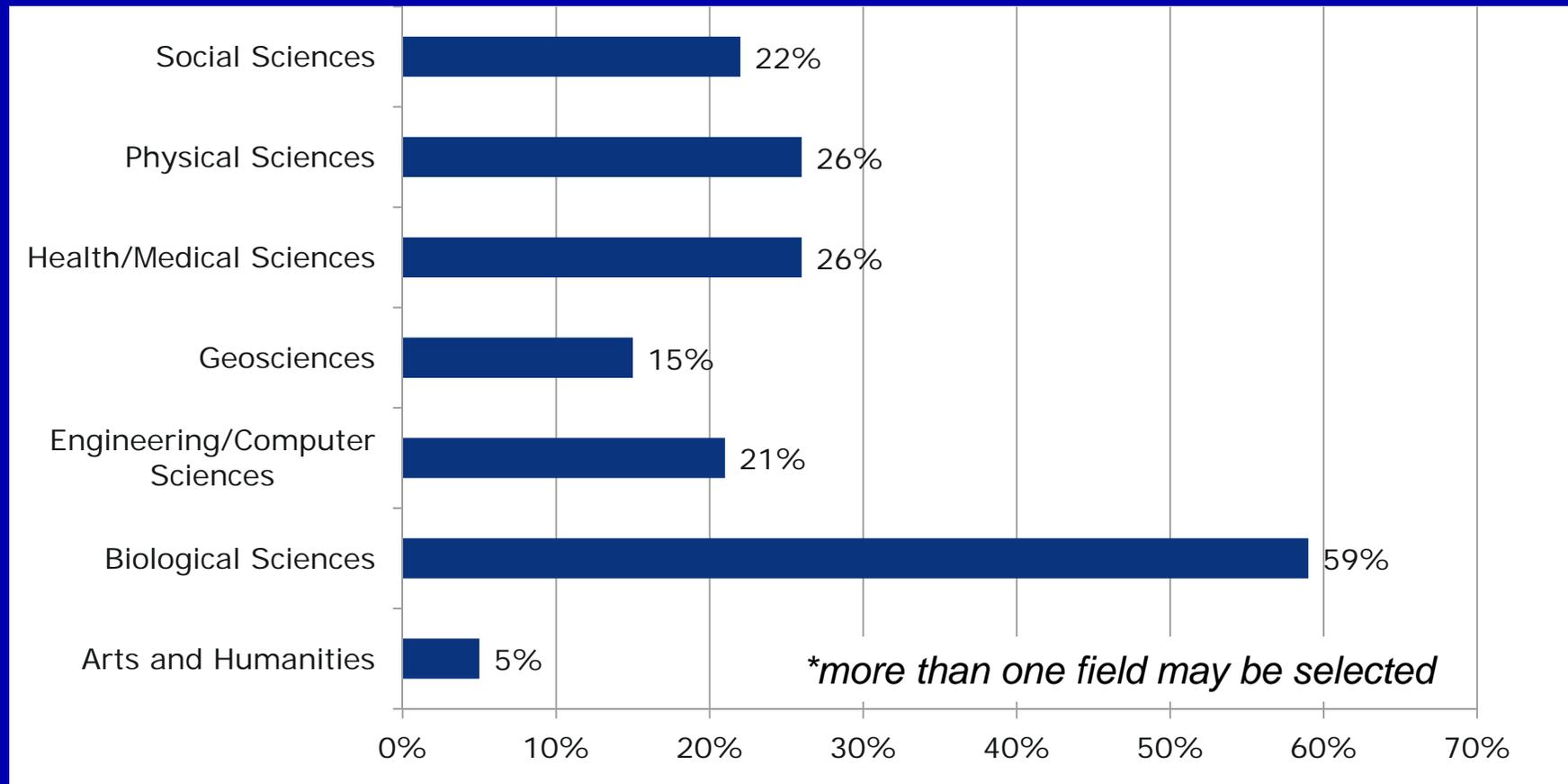
AAAS Fellowships in Non-Traditional Science Sectors

- Mass Media Science and Engineering Fellows Program
 - Started in 1974
 - 15-20 placements in radio and print media organizations during the summer
 - As reporters, editors, researchers, and production assistants
 - Example placements: Chicago Tribune, Los Angeles Times, National Public Radio, Philadelphia Inquirer, and Sacramento Bee
- Center for Science Diplomacy Research Scholar Program
 - Started in 2011
 - Up to 6 months hosted by the Center to pursue independent research on an area of science and diplomacy
- Science and Technology Policy Fellowships

2012-2013 S&T Policy Fellows: The Largest Cohort So Far



Fellows Come from Diverse Fields 2012-2013 Cohort



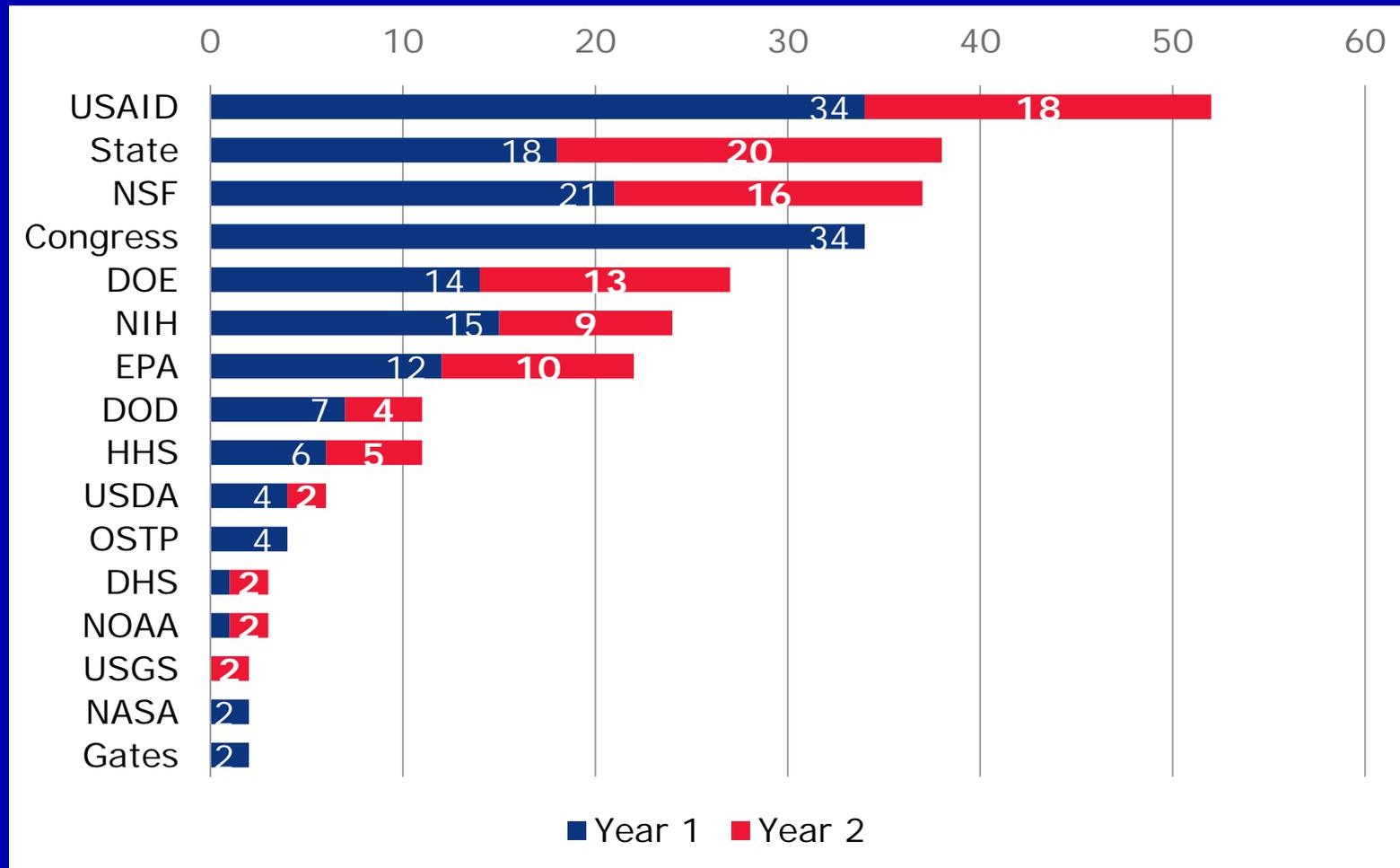
Main Fellowship Areas Cover Legislative and Executive Branches of Government

- Congressional
 - House of Representatives and Senate Member Offices and Committees
- Diplomacy, Security & Development (DSD)
 - USAID, State, DOD, Homeland Security, USDA/Foreign Agricultural Service, NIH/Fogarty International Center
- Energy, Environment & Agriculture (EEA)
 - DOE, EPA, NSF, NASA, NOAA, USDA, USGS
- Health, Education & Human Services (HEH)
 - NSF, NIH, Health & Human Services, Veterans Affairs, USDA/Food Safety Inspection Service

Additional Fellowship Opportunities for Current or Alumni Fellows

- AAAS Overseas Fellowships (restarted in 2011-2012)
 - USAID Missions
- Global Health & Development Fellowships (new in 2012-2013)
 - Gates Foundation

2012-13 Placements: 279 Fellows



The Work of Congressional Fellows

- Collect and analyze information
- Research options
- Meet with constituents and interest groups
- Organize hearings
- Write: briefings, talking points, speeches, press releases, reports, text for bills
- Facilitate, negotiate legislation
- Monitor policy implementation

Examples:

- Organized press conference announcing proposed bill on early warning systems following the Asian earthquake and tsunami
- Wrote text for bill on water quality restoration of Colorado River
- Coordinated oversight investigation of food safety issues and handling of peanut product recall

The Work of Fellows in the Executive Branch

- Collect and analyze information
- Research options
- Meet with stakeholders
- Interagency collaborations and negotiations
- Write: briefings, talking points, speeches, text for reports, press releases
- Preparations for hearings
- Program development, implementation and evaluation

Examples:

- Assisted developing U.S. counter-piracy strategy for Horn of Africa
- Orchestrated distribution of >\$5 million in famine funds to provide rust resistant wheat seed
- Lead drafter of Connecting the Americas 2022 initiative factsheet. Talking points for President Obama during bilateral meetings with Costa Rican President

Origins

&

Impact

United States in the late 1960's and early 1970's

- Environmental issues, pesticides, nuclear energy, arms race, Vietnam war, energy crisis, new technologies (GMO's, microprocessor...)



40 Years of Fellows

- 1973-2013



- Stanford Workshops on Political and Social Issues
 - Congress disadvantaged for technical advice compared to Executive Branch. Joel Primack (UC Santa Cruz was recent Stanford physics PhD serving on AAAS committees) and Frank von Hippel (Princeton physicist) wrote workshop report “The Politics of Technology” 1970.
- William T. Golden (longtime AAAS treasurer, investment banker, philanthropist) provided financial support (anonymous donation)

Fellowship Goals

- Individual-level
 - Support career development for scientists to become more capable of informing the discussions and decisions of the individuals and institutions that influence or determine policies.
- Policy-level
 - Support better policies by providing scientific knowledge and analysis to support decision-makers.
- Community-level
 - Foster positive exchanges between scientists and policymakers and increase the involvement of scientists in the public policy arena.

A Partnership



- Professional Scientific Societies
 - Started with American Physical Society, American Society of Mechanical Engineers, and IEEE
 - Over 60 societies have sponsored fellows (typically 30 societies participate in any given year)

News Archives

*In 2010, to support up to 230 fellows
over 5 years*

AAAS S&T Policy Fellowships Program Receives \$30.1 Million EPA Award

The renowned AAAS Science & Technology Policy Fellowships program this month entered into a five-year cooperative agreement with the U.S. Environmental Protection Agency (EPA) that will provide \$30.1 million in support for hundreds of scientists and engineers.

"The EPA award is a wonderful testament to AAAS, to the program, and to the Fellows," said Program Director Cynthia Robinson. "It is

• LINKS

[Learn more](#) about the AAAS Science & Technology Policy Fellowships program.

- Government Agencies and Offices
 - NIH, NSF, DOE, USDA, DOD, OSTP, DHS, NOAA, USGS, NASA



401



288



251

Strong Alumni Network in Government, Non-Governmental Organizations, and the Private Sector

- 2600 Fellows
 - 1100 Legislative branch
 - 1500 Executive branch
- The year after fellowship:
 - ~half remain in public policy
 - ~quarter return to work in the same sector prior to fellowship
 - ~quarter do something completely different



Rush Holt
*New Jersey Congressman
(1982 APS Congress)*



Keri-Ann Jones
*Assistant Secretary of State
for Oceans and International
Environmental and
Scientific Affairs
(1985 Diplomacy)*

Bill Colglazier
*S&T Adviser to the
Secretary of State
(1976 Congress)*



Frances Colón
*Deputy S&T Adviser to the
Secretary of State
(2006 Diplomacy)*



Arati Prabhakar
*Director
DARPA
(1984 Congress)*



Alex Dehgan
*S&T Adviser to the
USAID Administrator
(2003 Diplomacy)*

Nora Gardner
*Principal
McKinsey & Co.
(2004 NIH)*



Peter Kozodoy
*Founder/CEO
Glint Photonics
(2004 Diplomacy)*





Joe Helble
*Professor and Dean
Thayer School of Engineering,
Dartmouth
(1992 Environmental,
2004 Revelle)*



Rosina Bierbaum
*Professor and former Dean
SNRE, U. Michigan;
Member PCAST
(1980 Congressional)*

Jessica Tuchman Mathews
*President
Carnegie Endowment for
International Peace
(1973 Congress)*



Kevin Michael Foster
*Professor and Executive Director
Institute for Community,
University and School
Partnerships
UT Austin
(2009 HEHS)*



Steven Buchsbaum
*Deputy Director, Discovery
Bill & Melinda Gates Foundation
(1997 Diplomacy)*



Francesca Grifo
*Senior Scientist and Science
Policy Fellow
Union of Concerned Scientists
(1990 Diplomacy)*

Andrew Robertson
*Director of Regulatory Policy
Merck
(2005 NTI, 2006 HEHS)*



Audrey Ichida
*Senior Manager
ICF International
(2000 Risk Policy)*



Program Expansion and Model

- Program continues to grow in terms of number of fellows and placement opportunities. E.g.,
 - In State Department, fellows not only in the functional bureaus like OES but increasingly also in the regional/political bureaus
 - Gates Foundation
- Model for other programs
 - Jefferson Science Fellows for established academic scientists at State Department/USAID and administered by National Academies (launched in 2003)
 - California S&T Policy Fellowship by the California Council on S&T (launched in 2009)
 - Israel Society of Ecology & Environmental Sciences Environmental Science-to-Policy Fellowships “Mimshak” Program (launched in 2011)

How does it work?

The Process

Qualifications

- Doctoral-level degree (PhD, MD, DVM, DSc) in any scientific or engineering discipline
or
Master's degree in engineering with three years of professional engineering experience
- U.S. citizenship*
- Not current federal employees (post-docs at federal labs are eligible)

* *Some partner societies accept non-U.S. citizens*

Application Materials

- Candidate Data
 - Areas of scientific specialty; areas of policy interest
 - Brief bio
- Candidate Statement (1,000 words maximum)
 - Reasons for applying
 - Summary of background & expertise
 - Areas of Interest
 - Career Goals
- Curriculum Vitae
- Extracurricular activities, brief examples beyond the lab or classroom
- References, 3 letters

Criteria

- Solid S&T credentials for career stage
- Show a commitment to apply scientific or technical expertise to serve society
- Exhibit good communication skills, especially to non-scientific audiences
- Demonstrate
 - problem-solving
 - initiative
 - maturity, good judgment
 - leadership qualities
- Match to fellowship program area

Selection Process

- Application submitted by candidates
- Eligibility and required material check by staff
- Initial review and scoring by at least three alumni fellows to designate a priority review group
- Selection committee members review and rate the priority review group from which a subset (the semi-finalists) is invited for in-person interviews
 - Selection committee represents diverse sectors (government, academia, NGO, private sector) and can be alumni fellows, agency representatives who have hosted fellows, other policy experts (e.g., in DSD, science counselor from an embassy)

- Semi-finalist presentation of short briefing memo (written memo submitted in advance) and interview (30-min) with selection committee from which the finalists are selected
- Executive Branch: Finalists interview with government offices during a single “Placement Week”
- Matching between finalist preferences and office preferences, and finalists who accept an offer become fellows
- Congressional finalists interview with offices and matched after the orientation period in September

2014-15 Application Schedule*



Selective Process 2013-2014 Statistics (AAAS only)

	Applications	To Selection Committee	Interviews	Finalists
Congressional	101	31	11	2
DSD	267	162	95	64
EEA	193	164	96	59
HEHS	280	126	71	44
	841	483	273	159* (~19%)

* includes 30 dual finalists = 129 individual finalists

Stipend and Support

- Stipend/Salary
 - Federal Government General Schedule 12 (GS-12) or equivalent
2012: ~\$74,000 – \$97,000 per year
- Health Insurance:
 - Individual to family coverage
- Relocation Reimbursement*
 - Up to \$4,000 if relocation is >50 miles from DC
- Travel/Training Allowance*
 - Up to \$4,000 with prior approval
- Professional Development
- Alumni Network

** Varies by agency*

Professional Development

- Orientation
 - 2 weeks at the start of fellowship
- Skill Development & Career Workshops
- Educational Events
- Affinity Groups
- Networking

Observations from a Former Fellow

- Trusted, non-governmental, non-partisan scientific organization that runs the process
- Key selection criteria (scientific merit, communication skills, and supports goals of fellowship)
- Not necessarily about specific scientific expertise
- Not about employment (though many stay in Washington to work on policy issues, some in government). Important that some go back to either the academic or private sector to give those places more awareness about the policy world.
- Mid-level staff positions important (the guts of policy-making)
 - Some places, fellows serve as staff (especially important in non-science-centric organizations like the State Department or much of Congress)
 - Other places, fellows take on special projects

- Sustainable funding mechanisms are crucial
 - Government agencies
 - Philanthropy
 - NGO/scientific society
- Flexible placement mechanisms matched to the agency/office
- Future/current considerations for the program
 - Fellows primarily from academia, few from industry
 - Expansion without diluting quality
 - More formal or structured fellowship alumni interactions and activities
 - U.S.-focused (interest from international organizations/multilateral organizations)

AAAS S&T Policy Fellowships Office

- Cynthia Robinson, director since 2004
 - crobinson@aaas.org



- 18 staff that cover programs, outreach/engagement, finance, and security
- fellowships.aaas.org