Advocating Science: Learn to Communicate Effectively with Lawmakers

Jyotsna Pandey, Ph.D.
Public Policy Director
EVENT OVERVIEW

• 12th annual event
• No event in 2020 due to COVID–19
• Hybrid event this year: virtual and in–person
• Meetings and tours with federal and state lawmakers
• ~120 participants
• 18 states represented
• Compliments meetings in DC
EVENT SPONSORS
WHY WE ORGANIZE THIS EVENT

• Educate lawmakers about science
• Promote investments in science
• Support advocates for science
• Meetings/tours personalize science
ROLE OF GOVERNMENT IN SCIENCE

• How many grants get funded?
  • Roughly 1 in 5 biological research grants funded
• What disciplines/subdisciplines are prioritized?
• What stages of scientific pipeline are support?
  • More established researchers get more funding
• How much time do researchers spend on paperwork?
• What is taught in science classrooms?
FEDERAL R&D AS SHARE OF GDP

Data provided by AAAS
Federal Funding for Biological Research and Education
YOUR TAX DOLLAR

Data provided by the White House for 2014
PRESSURES FROM MANDATORY SPENDING

- Mandatory spending
  - Required by law
  - Social Security, Medicare, unemployment insurance, food stamps, salaries for Congress and the President
  - Makes up about 65% of the entire budget
- Discretionary spending
  - Decided by Congress annually
  - Military, highways, government salaries, foreign aid, national parks, education, R&D
BUDGET CAPS & SEQUESTRATION

• Set limits on discretionary spending for a decade
  o Cuts equally divided between defense and non-defense
  o Congress decided what programs get cut
• No longer an issue this year, allowing lawmakers some flexibility
  • Science agencies could see significant increases
SHRINKING AND STAGNANT FUNDS

• Funding for biological and ecological research has shrunk over the last decade for:
  • USGS (Ecosystems)
  • Forest Service (Forest & Rangeland Research)
  • EPA (Science & Tech)

• Hasn’t kept up with inflation for:
  • Energy Office of Science (Biological & Environmental Research or BER)
  • NIH
  • NSF (BIO)
  • USDA (Agricultural Research Service or ARS)
  • NOAA
PRESIDENT’S BUDGET REQUEST

• Biden released budget request on May 28
• $1.5 trillion discretionary spending in FY 2022
  • $769 billion (+16 percent) for nondefense
  • $753 billion (+1.7 percent) for defense
• Proposed large increases for several federal science agencies and programs

<table>
<thead>
<tr>
<th>Agency/Program</th>
<th>FY2021 Enacted</th>
<th>President’s Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSF</td>
<td>$8.5 billion</td>
<td>+20%</td>
</tr>
<tr>
<td>DOE Office of Science</td>
<td>$7 billion</td>
<td>+5.7%</td>
</tr>
<tr>
<td>EPA</td>
<td>$9.2 billion</td>
<td>+21%</td>
</tr>
<tr>
<td>NOAA</td>
<td>$5.4 billion</td>
<td>+26%</td>
</tr>
<tr>
<td>NIH</td>
<td>$42.9 billion</td>
<td>+20%</td>
</tr>
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</table>

Detailed analysis of President’s FY 2022 budget request for biological sciences available at: aibs.org/policy/resources
CONGRESSIONAL ACTION

• House has begun work on appropriations bills for FY 2022; Appropriations Committee has approved all twelve bills.
  • Science agencies & programs slated for increases.
  • In most cases, smaller or equal increases are proposed compared to budget request
• Senate has yet to begin working on appropriations
• Both chambers need to pass final bills by Sept. 30
# FY 2022 Budget Numbers

(Relative to FY 2021)

<table>
<thead>
<tr>
<th>Agency/Program</th>
<th>President’s Request</th>
<th>Congressional Action</th>
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</thead>
<tbody>
<tr>
<td>NSF</td>
<td>+20%</td>
<td>+14%</td>
</tr>
<tr>
<td>NSF - Research and Related Activities</td>
<td>+18%</td>
<td>+11%</td>
</tr>
<tr>
<td>USGS</td>
<td>+25%</td>
<td>+25%</td>
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<tr>
<td>USGS - Ecosystems</td>
<td>+38%</td>
<td>+37%</td>
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<tr>
<td>DOE Office of Science</td>
<td>+6%</td>
<td>+4%</td>
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<td>DOE Science BER</td>
<td>+10%</td>
<td>+7%</td>
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<tr>
<td>EPA Science and Technology</td>
<td>+14%</td>
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<tr>
<td>NOAA</td>
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<tr>
<td>NIH</td>
<td>+21%</td>
<td>+15%</td>
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<tr>
<td>USDA ARS</td>
<td>+24%</td>
<td>+15%</td>
</tr>
<tr>
<td>USDA AFRI</td>
<td>+61%</td>
<td>+3%</td>
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</table>
## FUNDING ASKS

### FY 2022 Asks for Federal Agencies and Programs:

<table>
<thead>
<tr>
<th>Agency/Office/Program</th>
<th>Our Ask</th>
<th>President's FY 2022 Request</th>
<th>FY 2021 Enacted</th>
<th>House FY 2022 Bill</th>
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<tbody>
<tr>
<td>NSF</td>
<td>$10.2 billion</td>
<td>$10.2 billion</td>
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<tr>
<td>USGS</td>
<td>$1.75 billion</td>
<td>$1.6 billion</td>
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<tr>
<td>USDA-ARS</td>
<td>$1.9 billion</td>
<td>$1.9 billion</td>
<td>$1.5 billion</td>
<td>$1.8 billion</td>
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<tr>
<td>USDA-AFRI</td>
<td>$700 million</td>
<td>$700 million</td>
<td>$435 million</td>
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<td>NIH</td>
<td>$52 billion</td>
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<td>$49 billion</td>
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<tr>
<td>DOE Science</td>
<td>$7.7 billion</td>
<td>$7.4 billion</td>
<td>$7 billion</td>
<td>$7.3 billion</td>
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<tr>
<td>IMLS</td>
<td>$282 million</td>
<td>$265 million</td>
<td>$257 million</td>
<td>$282 million</td>
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<tr>
<td>IMLS OMS</td>
<td>$80 million</td>
<td>$46.5 million</td>
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<td>$54.5 million</td>
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</table>

Available at aibs.org/policy/resources
BENEFITS OF IN-DISTRICT MEETINGS

• Legislators can put a face to a name of a facility
• Opportunity for policymakers to see direct benefits for their constituents and district

Scientists meets with Rep. Ros-Lehtinen
UNDERSTAND YOUR AUDIENCE
KNOW YOUR AUDIENCE

- Who are they?
- What is their knowledge level?
- What are their interests?
- What are their beliefs?
- Why should they care about what you have to say?
- Do they know they should care?
WHO ARE POLICYMAKERS?

Public Service/Politics

Law

Education

Business

Science and Engineering
CONGRESSIONAL STAFF

• Intelligent, educated
  ○ College graduates
  ○ Many have graduate or law degrees
  ○ Not scientists, unless fellows or on detail from agency

• Age
  ○ 20’s and 30’s

• Experience
  ○ Average time in job is ~ 2 years in Senate, < 1 year in House
DO YOUR HOMEWORK

• Sponsored or co-sponsored legislation
• Op-eds
• Press releases
• Their website
• Search the news (i.e. Google News)
• Hobbies
• Education or professional background
• Family interests
MOTIVATIONS

• Head: thoughtful consideration of an issue
• Heart: emotional, personal appeals
• (Political) Health: need to win re-election
  • Herd mentality: don’t want to be the first one to stick their neck out or the one left holding the bag
WHY SHOULD THEY CARE?

Their current knowledge

Their perceptions

What you want to share
TAILOR YOUR MESSAGE

...based on the views of your audience.

Senator Edward Markey (D-MA)
Favors action on climate change

Senator James Inhofe (R-OK)
Climate change denier
REMEMBER

• All politics are local.
PREPARE MEMORABLE CONTENT

Facts do not necessarily change minds
A NEW COMMUNICATIONS PARADIGM

- Don’t focus on “how”
  - “I use fluorescent labeling and microscopy to study the formation of lignin in plant cell walls.”

- Focus on “why”
  - “I study the formation of plant cell structure to improve the efficiency and lower the costs of producing biofuels.”

- Think about the big picture and broader implications of your work
FRAMING YOUR MESSAGE: THE BIG PICTURE

- Economic growth and jobs
- Education
- Environmental sustainability
- Food security
- Human health
- Innovation
- Local connection
Lawmakers are chiefly concerned with how an issue will impact their district and how voters in their district feel about the issue.

Lawmakers increasingly view issues through an ideological lens.
CRAFTING YOUR MESSAGE

Talking Point 1

Main Message

Talking Point 2

Transition Phrasing

Talking Point 3

Transition Phrasing

Transition Phrasing
MESSAGE FOR FEDERAL OFFICIAL

Public investments in research pay off

The university receives $25 million a year

Federal support is shrinking

Value of federal support for biological research

Grants are highly competitive

Innovation pipeline is jeopardized

Sustained funding is needed

Sample talking points are online
MESSAGE FOR STATE OFFICIAL

Preparation of the next generation of workers

- Importance of undergraduate science education
- Learning skills
- Research opportunities
- Graduate school
- Further opportunities
- STEM pipeline
• Customize based on your research and interests
• Examples:
  o Funding for NSF Biological Sciences Directorate drives innovation
  o Funding for USDA competitive research grants addresses food security and environmental sustainability
  o Undergraduate research opportunities train the next generation of scientifically skilled workers
OFFICE MEETING STRUCTURE

• Short: 15–30 minutes
• Introduce yourself and members of your group
  ○ Exchange business cards
• Start with a ‘thank you’
• Communicate your message
• Provide handout(s)
• Allow for dialogue and questions
• Offer to be of service in the future
• Thank them again
USE YOUR HANDOUTS

Available at aibs.org/policy/resources

BIOLOGICAL SCIENCES: AN INVESTMENT IN AMERICA’S FUTURE

Government investment in scientific research and development fuels innovation, creates jobs, and grows the economy.

BIOLOGICAL RESEARCH IS ESSENTIAL

Biological research funded by the National Science Foundation (NSF) and other federal agencies promotes national security and public well-being by solving pressing challenges, such as improving food security, combating new diseases, and wisely managing natural resources. This federal support helps the U.S. attract and educate the next generation of scientists. Students learn research skills that prepare them for the jobs of today and tomorrow.

NSF’s Biological Sciences Directorate provides about 67% of federal grant support for non-medical, fundamental biological research conducted at our universities and nonprofit research centers.

MEETING SOCIETY’S NEEDS

Research increases our understanding of the living world and provides solutions to important problems.

- Improving human health with individualized and predictive medicine.
- Predicting, mitigating, and preparing for the impacts of environmental changes.
- Sustaining biodiversity and healthy ecosystems that underpin the livelihoods of communities.
- Increasing food security by developing crops that grow in changing environments.
- Developing new tools to stimulate development of new research fields.
- Fueling the economy by improving the sustainability of domestic energy sources.

Every day, biological and environmental research and education programs take place at more than 1,100 sites around the nation. Whether at a field station, a natural science collection, or a zoo, aquarium, or botanic garden, place-based science provides insights into our nation’s most pressing issues.

TYPES OF INSTITUTIONS

FIELD STATIONS
Research stations across the country further our understanding of local living and non-living resources, monitor long-term environmental changes, and develop remediation and restoration techniques for degraded ecosystems. Although many field stations are affiliated with universities, some are partnered with federal programs, such as the National Science Foundation’s (NSF) Long-Term Ecological Research Network.

NATURAL HISTORY MUSEUMS
Natural science collections, consisting of plants, animals, rocks, soil, and tissue and cell cultures, are libraries of Earth’s history. These irreplaceable resources inform our understanding of past and present life on earth and our response to important problems, such as conserving biological diversity, combating the spread of invasive species, and informing public health responses to emerging diseases.

ZOOS, AQUARIUMS, AND BOTANIC GARDENS
These institutions expose the public to the diversity of our natural world and, in many cases, conduct genetics and biological conservation research. Each year, education programs at zoos, aquariums, and botanic gardens educate over 50 million students and train thousands of teachers.

OUR NATION BENEFITS FROM PLACE-BASED SCIENCE

Place-based research institions benefit local communities, states, and the nation. Research conducted at these facilities informs policymakers, creates jobs, and helps educate students and the public at large. The limited federal support for these institutions is spread across the budgets of many agencies, including NSF, the Departments of Agriculture, Energy, and Interior, the Institute of Museum and Library Services, and the National Institutes of Health.
OFFICE MEETING STRUCTURE

• Short: 15–30 minutes
• Introduce yourself and members of your group
  ○ Exchange business cards
• Start with a ‘thank you’
• Communicate your message
• Provide handout(s)
• Allow for dialogue and questions
• Offer to be of service in the future
• Thank them again
VIRTUAL MEETINGS

• Join or start the call 5–10 minutes early, but expect to wait (send meeting reminder)
• Each meeting will typically last about 15–30 minutes
• Start with a thank you & get to the point quickly
• Coordinate talking points if meeting as a group
• No PPTs! But you can share a graphic/image
• One-page leave behind can be shared by email
• Allow for dialogue and questions
• Offer to be of service in the future
• Thank them again
LEARN FROM THE CONVERSATION

• Where the policymaker is on the issue?
• What are their concerns?
• Who else are they hearing from?
• Who do they need to hear from to be supportive?
RELATIONSHIP BUILDING
EXAMPLE MEETING

• Watch online at aibs.org/policy/resources

• Or go to www.aibs.org > Policy > Resources
TOUR OF RESEARCH FACILITY

• Coordinate appropriate length tour
• Appropriate meeting place
• Decide route/stops in advance
• Coordinate talking points and timing among speakers
• Get government relations involved

See more tips for a tour on our handout
PREPARATION

• Learn about your legislator
• Research economic and societal benefits
  o Our state receives $80 million a year in NSF grants
  o The department trains 15 graduate students each year
  o Use a personal example
• Anticipate questions on the policy implications of your research
• Anticipate arguments of opponents
  o Cost of implementation
  o Fundamental doubts about the science
TIPS FOR EFFECTIVE COMMUNICATION

• Be prepared and succinct
• Stay on message
  o Repetition is the key to being heard
  o Answer questions and bring focus back to main points
• Be conversational
  o Offer short anecdotes and facts that illustrate your key points
  o Avoid scientific jargon and acronyms
  o Explain things as you would to an undergraduate
• Be respectful, positive, and attentive
  o Don't monopolize, patronize, or complain
"But this is the simplified version for the general public."
PITFALLS TO AVOID

• Avoid partisanship
  o If a question is outside your area of expertise, offer to contact an appropriate expert

• Clarify your opinion versus those of your organization

• Don’t:
  o Overload with information and papers
  o Make unrealistic demands
  o Suggest a program to cut to increase funding for yours

• Staff are important: they advise the lawmaker
DRESS APPROPRIATELY

Photo credits: Julie Palakovich Carr and JP Lawrence
DRESS APPROPRIATELY

Photo credits: Ben Delp and Teresa Mayfield
MEETING SCHEDULING

• I’ve emailed about 1/3 of you already. Please respond to my email if you haven’t already.
• If I haven’t emailed you yet, expect an email within two weeks. Sooner if you want to meet in August.
• Lawmaker’s office will contact you directly to set the date/time
• If you don’t hear anything, I will follow up
POST MEETING

• Write a thank you note or email
• Follow up with any requests for information
• Let me know how your meeting went
  o Share pictures
  o jpandey@aibs.org
  o Twitter: Tag us @AIBSbiology (#BSCDV2021)
STAY ENGAGED

• Join the AIBS Legislative Action Center
  ○ Online tool to communicate with your elected officials, track science legislation, and more
  ○ aibs.org/policy/action

• Sign up for the AIBS Public Policy Report
  ○ Bi-weekly science policy news and analysis
  ○ aibs.org/policy/
THANK YOU!
QUESTIONS?

Jyotsna Pandey  
Public Policy Director  
jpandey@aibs.org  
202-628-1500 x225

Event page: IO.AIBS.ORG/CDV  
Resources: aibs.org/policy/resources