Recommended Practices for Science Communication with Policymakers

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“It is no longer sufficient for scientists in academia, government, nongovernmental organizations (NGOs), or industry to conduct business as usual. Today’s challenges demand an all-hands-on-deck approach wherein scientists serve society in a fashion that responds to societal needs and is embedded in everyday lives.”

— Jane Lubchenco,¹  
Former Administrator of The National Oceanic and Atmospheric Administration

INTRODUCTION

This guide grows out of the research project “Evidence-based Science Communication with Policymakers” conducted by the four authors and sponsored by the National Academy of Sciences and the Rita Allen Foundation. In order to write these recommendations, we spent over a year studying science communication with policymakers from several vantage points. We reviewed hundreds of scholarly works on the topic published in over a dozen fields as well as numerous practical guides written by scientific societies. We interviewed both Democratic and Republican Congressional policymakers, including 22 Members of Congress and 20 staff members. We also conducted a random-sample survey of over 600 scientist members of the American Association for the Advancement of Science (AAAS). In our interviews and survey, we asked individuals to tell us, in their experience, what science communication practices are most, and least, effective.

The recommendations in this guide represent our efforts to distill this research into one brief, useful document. Because our interviews and prior expertise focus on the U.S. Congress, this guide is most relevant to interactions with that body. However, we believe our advice is applicable, with some modifications, to other policymakers as well.

We have been privileged to receive assistance from many wonderful organizations and individuals. We want to thank the National Academy of Sciences—particularly Marcia McNutt, Marty Perrault, and Susan Marty—as well as Elizabeth Good Christopherson and others at the Rita Allen Foundation, without whom this project would not have been possible. Thank you to our talented and generous volunteer advisory board: U.S. Representative Don Beyer (D-VA), Dominique Brossard, Heather Douglas, Eric Fischer, David Goldston, Arthur Lupia, Michael Oppenheimer, Naomi Oreskes, Wendy Parker, Shobita Parthasarathy, and Tobin Smith.² Of course, we would be nowhere without our research participants; our deepest thanks to them (who cannot be named due to our promise of confidentiality). We also extend our appreciation to our home institutions—the School of Public Affairs at American University and the American Association for the Advancement of Science—who offered additional resources and flexibility as we devoted many hours to this project. Finally, thank you to the resourceful and skilled AU students and AAAS staff who assisted us: Bella Rafailova, Dakota Stroud, Chloe McPherson, and Dana Brandt.

We hope you find this guide helpful as you seek to advocate for the greater use of quality evidence in the policymaking process.

² Board members provided their recommendations only and are not responsible for specific content.
PLANNING AHEAD

Research Your Audience

You’ll need to answer some questions about your intended audience as you plan your science communication. Most importantly, With whom will you seek to communicate? At the federal level, options include elected officials, their personal staff, legislative committee staff, those who work within the Executive Office of the President, and those who work within federal agencies. Prior to contacting a specific person, make sure you at least know their name and portfolio of responsibilities. (Impersonal calls or emails, or those directed at the wrong person, are rarely returned.) This information can often be gleaned from the policymaker’s website or by calling an office’s main number and asking the receptionist. You might also consider contacting an experienced and trusted boundary organization, advocacy organization, or your institution’s government relations office.

Once you have a meeting scheduled and/or are preparing written materials, you should learn more about the people who will be listening or reading. For science communicators, it is especially helpful to know ahead of time the knowledge level of your likely audience. Investigate their educational background and prior professional experience, e.g., via the office’s official website or a website such as LinkedIn. There are also some general rules of thumb you can follow. For example, in the House of Representatives, personal office staff tend to be policy generalists with social science backgrounds, whereas committee staff often have technical backgrounds and deep expertise in specific topics. Of course, there are exceptions to every rule. If you cannot ascertain expertise ahead of time, plan for a lower level of knowledge but have technical details at the ready (or in footnotes).

Even if you are interacting with a staff member, additional research about the office—and the official who heads it—is essential. Is the official a Democrat or Republican? What district do they represent, and what are the district’s salient political, demographic, and economic characteristics? What committees and caucuses are they on and what issues and priorities do they champion? What bills have they sponsored related to the topics you plan to engage with them about? Have they received recognition from organizations in your area of interest? Much of this information can be gleaned from the office’s official website and from news articles.

Work With Others

It can be very helpful to work with others. There are different types of, and reasons for, coordination.

First, consider working with one or two others in your field who have complementary expertise. You can each speak (or write) on your own expertise and, together, cover a lot of ground. You may also be able to more successfully field questions you receive. This said, group visits must be well coordinated—focus on one theme, avoid redundancy, and ensure all participants can speak within the (likely) short time allotted. When visiting Congressional offices, it can be useful to include in your group a person with some policy expertise. We have also been told that including a student can be very beneficial; students can sometimes be better “translators” for nonexperts, and they can convey infectious enthusiasm about your subject matter.

Second, consider working with your organization’s government relations office or with an advocacy or boundary organization. Your government relations office can connect you to resources and share tips; they may also have knowledge of ongoing communication efforts in your area that you may wish to join or build on. Advocacy organizations (such as the Sierra Club) and boundary organizations (such as the American Geophysical Union) have considerable experience and extensive connections among policymakers. In fact, one of the things we learned in conducting our study was just how often policymakers turn to these groups for scientific and technical information. Of course, be aware of advocacy and boundary organizations’ reputations and try to learn how they may be perceived by the offices with whom you wish to engage. Even nonpartisan groups can be viewed—sometimes unfairly—as “ideological.”

Consult Available Resources

In addition to this guide, there are many other sources of advice, some of which may be more tailored to your specific area of expertise. We reviewed the websites of over 200 scientific societies affiliated with AAAS to gauge the guidance offered and found that approximately 40 offered at least some advice for communicating with policymakers.6

Standouts offering particularly extensive and high-quality advice include: American Dental Education Association, American Geophysical Union, American Meteorological Society, American Physiological Society, American Society of Limnology and Oceanography, American Society of Plant Biologists, American Speech-Language-Hearing Association, Association for Women in Science, Ecological Society of America, Entomological Society of America, Gerontological Society of America, and National Council of Teachers of Mathematics.

If you would like to follow-up your reading of this guide with a more comprehensive and detailed treatment, we suggest you consult AAAS’ 74-page guide Working with Congress: A Scientist’s Guide to Policy, available at https://www.aaas.org/sites/default/files/2018-09/AAAS_Working_with_Congress.pdf.

3 “Boundary organizations” facilitate information sharing between scientific research and public policy communities.
4 We could only learn what was available on each society’s public website; it is possible that more societies make information available to their members via subscriber portals or other methods.

AAAS also offers several different workshops and seminars on science communication, including some focused on communicating with policymakers.7 Other organizations that offer training in science communication include COMPASS and the Alda Center for Communicating Science.

Practice and Get Feedback

If you have a meeting scheduled, engage in some practice with a colleague or, better, a friend who isn’t well-versed in your field. Memorize a five-minute version of your main points and argument and a one-minute “elevator pitch” (in case time is cut short or an unexpected conversation opportunity arises). Try to anticipate, and answer, likely questions.

If you are preparing a document, it is likewise a good idea to obtain feedback, again, preferably from someone you know outside of your area of expertise. Make sure that your written materials do not include spelling or grammatical errors; such errors will undermine your credibility as well as your ability to communicate.

COMMUNICATION GOALS

Identify and Articulate Your Goals

We can’t emphasize enough the importance of having a clear purpose for engaging with a policymaker. Policymakers’ time is in great demand. At the same time, policymakers are oriented toward being of help, especially if you are a constituent. Ask yourself: Why are you engaging with the policymaker? What are you asking of them? When you communicate, make your goals clear from the outset.

Scientists and other technical experts engage for a wide variety of reasons. Maybe you want to bring attention to a pressing public problem or provide technical advice regarding legislation. Maybe you wish to advocate for a specific policy. Perhaps you intend to advocate for funding for yourself; an organization to which you belong, or your discipline, or maybe you are focused on relationship building or establishing yourself as a resource, hoping that there will be fruitful future interactions.

Once you have identified your general purpose, consider—in consultation with others with more experience in the policymaking arena, if necessary—what an elected official might do to further your goal. Introducing legislation is just one of many possible actions. Officials can:

• Write letters to agency heads
• Ask for briefings from agency staff
• Hold hearings
• Ask specific questions to witnesses at or after hearings
• Co-sponsor legislation
• Offer an amendment to legislation
• Include certain report language with a bill leaving committee
• Support or oppose a nominee
• Join a sign-on letter
• Organize a briefing for elected officials or staff
• Give a speech or attend an event
• Request appropriations language
• Comment on proposed regulations
• Issue a press release
• Make a floor statement
• Join a caucus

Whatever your goals, keep them in mind as you craft your communication strategy and make them plain to the people with whom you are communicating.

Communicate Shared Goals

While a variety of goals are acceptable when communicating with policymakers, you are more likely to be successful if your communication is about more than just advancing your professional goals. In a democratic society, what we ask of policymakers should be of help to others as well, and our system of frequent elections keeps elected officials and their staff attentive to the public good, particularly that of constituents at home in the district (U.S. House) or state (U.S. Senate).

Beyond this general concern for constituents and the public, elected officials and staff spend much of their days focused on developing and considering legislation and conducting oversight of the executive branch, most often as a part of committee and subcommittee work.8

5 You can learn more about AAAS’ Communicating Science program here: https://www.aaas.org/programs/communicating-science. Other AAAS training opportunities include the Science & Technology Policy Leadership Seminar and, for students, the Catalyzing Advocacy in Science and Engineering Workshop.
6 Elected officials’ offices also spend considerable time on constituent casework and fundraising.
As you plan your communication with a policymaker, think through how your goals might overlap with theirs. For example:

- Are you bringing attention to a pressing public problem that affects their constituents?
- Are you providing advice on a piece of legislation being developed by a committee on which they sit or on a topic known to be of interest to the policymaker?
- If you are advocating for funding, does the policymaker play a role in the decision or have a stake in it?
- If you are engaged in relationship building, is this a relationship from which the policymaker benefits as well?

This list is not exhaustive. Consider all of the ways in which your goals may overlap with policymakers’. Making this goal alignment salient is a critical aspect of the content of your communication.

COMMUNICATION CONTENT

Practice Ethical Communication

It may go without saying that scientific experts should engage in ethical communication; however, ethical communication is more demanding than many realize. You should provide information that is accurate and complete—conveying the range of quality expert knowledge on a topic, including points of disagreement or uncertainty.

Disclose any conflicts of interest. Even if there are no formal conflicts of interest, science communicators should reflect on possible biases stemming from their personal and professional interests, social and political values, and background assumptions linked to social class and identity.

Finally, science communicators should resist the temptation to speak as “experts” beyond the boundaries of their expertise. If you don’t know the answer to a question, say so. (If you will be able to obtain the information at a later date, make that clear to the questioner and follow up promptly.) This rule also includes policy advocacy: if you are not expert in the development and evaluation of policy solutions, then it is best not to advocate (as an expert) for any particular one. Of course—policy expert or not—you are free to speak your mind about anything you wish as a citizen; just be sure your audience knows which “hat” you are wearing at any given moment. In other words, be clear when you’re stating a conclusion based on a systematic evaluation of relevant evidence, and when you’re stating an opinion or preference.

Make Sure You Are Understood By Nonexperts

When communicating outside their field, scientific experts should remember to speak and write in ways that a person who is not trained in their field can understand. This includes minimal use of acronyms and jargon (and any such terms must be defined). Note that terms that seem like everyday language to you—e.g., “seismic waves,” “carbon sequestration,” “half-life,” or “correlation”—may be jargon to others.

Communication aimed at policymakers should also be concise and well-organized, as your audience is likely absorbing considerable new information. In general, use concrete, real-world examples to illustrate your empirical points, particularly examples in narrative form. Quantitative information presented visually, through the use of graphics, tends to be better understood and retained than comparable information presented in tables. Finally, to ensure a key point is not only understood but remembered, use repetitions: state it toward the beginning of your communication and repeat it at least once.

Be Relevant

Experts should communicate the importance of the topic at hand. First, be sure you have an answer to the question: Why should I care? As discussed previously, communications aimed at policymakers should be in sync with their goals as legislators and representatives. Second, briefly state why your topic is important explicitly and up front, using it to frame your communication.

You can increase interest by using examples that will resonate with policymakers and their staff, such as references to their district or topics linked to their committee work. For example, if you want to highlight the positive economic impact of some type of investment in scientific research, don’t just focus on GDP; discuss likely economic benefits to the community, personal recommendations are powerful. If you are connected play an outsized role in establishing you as a trusted expert in policymakers’ eyes. Our interviews with Democratic and Republican Members of Congress and staff suggest that most policymakers hold well-established expert institutions, including universities, scientific societies, and government labs and agencies in high regard. Many advocacy groups and some think tanks have solid histories of positive interactions with offices; thus, joining with such a group can open doors for you—although remember that such groups may also close doors based on their ideological leanings.

Finally, following the social logic of the policymaking community, personal recommendations are powerful. If someone close to a policymaker recommends you as worth speaking to, there is a good chance that policymaker will give you their time and trust.

story of what drew you to your area of study or the story of a previous researcher in your field whose publicly funded research led to a breakthrough with great public utility. This said, be sure to employ narratives ethically. Illustrative examples should reflect typical experiences or outcomes, not unusual ones. To make this clear, follow-up your story with relevant quantitative data on the phenomenon.

Communicate Credibility

Whether you are perceived as a credible expert depends on several factors, including your educational credentials, your grant and publication record, the reputation of your employer, and (if relevant) your track record advising policymakers. You should not feel shy about (briefly) discussing or otherwise conveying your qualifications and subject expertise if you feel those credentials are not apparent.

Policymakers, especially staff, will often look over written communications for signals that the information can be trusted. Are the claims well-sited? Are the citations to peer-reviewed literature? Is a short “one-pager” or policy memo supported by a longer, traditional research report? Does the scholar make available information on the study’s funders? Your perceived credibility also depends on interpersonal and other social phenomena.

SOCIAL ASPECTS OF COMMUNICATION

The policymaking arena—particularly the world of elected officials—is to be much more social than most scientists’ workplaces. There is an emphasis on relationships, reputations, and (despite what some media reports would suggest) personal relationships. Trust is extended to those who enjoy a positive reputation among policymakers; popular figures are intelligent, accomplished in their field, and participating in good faith. Avoid prejudice or stereotyping a person based on their age or group membership, including their political party or religious affiliation. Treat the communication as a dialogue. Leave room for questions and the possibility that your interlocutor may have their own goals for the conversation. When encountering reasonable criticism, counter-arguments, or skepticism, respond in a measured way. Such interaction can be a sign that you are being taken seriously. Finally, express gratitude after the interaction; even if an office is unable to help you further, their time is valuable.

Practice Respect

Whether you are emailing an office for the first time or sitting down for an in-depth meeting, it is important to give your conversation partner the respect they deserve. While they are unlikely to share your expertise, you should assume that they are intelligent, accomplished in their field, and participating in good faith. Avoid prejudice or stereotyping a person based on their age or group membership, including their political party or religious affiliation. Treat the communication as a dialogue. Leave room for questions and the possibility that your interlocutor may have their own goals for the conversation. When encountering reasonable criticism, counter-arguments, or skepticism, respond in a measured way. Such interaction can be a sign that you are being taken seriously. Finally, express gratitude after the interaction; even if an office is unable to help you further, their time is valuable.

COMMUNICATING IN A POLITICAL CONTEXT

Remember Science Is One Input of Many In The Policy Process

Many factors in addition to scientific conclusions shape policy outcomes, and this is a feature, not a flaw, of our government. Consider that there are always many serious problems—and opportunities—facing the country (and world) simultaneously. Yet, governmental time and resources are finite. This means that difficult decisions must be made about what to prioritize. Further, there normally are multiple avenues for addressing any given challenge, introducing debates not only over which method is most efficient but also which method is most appropriate given policymakers’—and their constituents’—value commitments.
Republican policymakers both tend to find arguments about public health and economic growth appealing, and both care about the costs of potential actions. Also, consider the possibility that staff members with whom you are meeting may hold a somewhat different value set than the official for whom they work.

Finally, there are some topics that are known to be controversial, or at least controversial with particular audiences. Avoid raising controversial issues that are irrelevant to the topic at hand. If you find yourself in an unproductive exchange, try to “agree to disagree” and move on, especially if it is not central to the discussion. Of course, sometimes points of controversy are integral to a topic. Strategies for more productive conversations under these circumstances include: anticipating, and preparing answers to, likely counterarguments; asking questions to identify precisely where disagreements lie; and waiting to discuss controversial topics until after common ground has been established. You might also make sure your meeting is private and confidential, which will encourage frank exchange.

PRACTICALITIES WHEN COMMUNICATING WITH POLICYMAKERS

Recognize Various Types Of Policymakers

In deciding with whom you should seek a meeting, you should know the roles and responsibilities of different individuals within government. The U.S. has a federal system, meaning that the national government creates one set of laws applicable to the entire nation, and state governments are free to create their own laws, so long as the laws do not conflict with the U.S. Constitution or other federal law. Below the state level is local government, states vary in how they are subdivided and in how much autonomy localities are afforded. At the national and state level, governments are divided between legislators—who make law—and executives—who approve and implement law, mainly via agencies. In implementing law, executives and agencies often have considerable discretion over the details of how a law is carried out.

Within legislatures, the bodies with which our research team is most familiar, elected officials employ many staff members, who handle most of the day-to-day work. Staff members fall into two general categories: personal staff (working directly for an elected official) and committee staff (working for a committee under the direction of elected officials who serve on that committee). Staffers often have considerable power to shape legislation.

Gain Access

Getting the attention and time of anyone working within the federal government (and many state and local governments) is not easy. Try not to be put off by the difficulties of gaining access. Policymakers are inundated with emails, phone calls, written material, and requests for meetings. Consider that each member of the U.S. House of Representatives represents a district made up of over 700,000 people. If a House member did nothing else but meet with constituents for 40 hours each week, granting each a 15-minute meeting, it would take over 80 years. Most U.S. Senators represent even larger constituencies.

Persistence, and some strategy, does pay off. If you are a constituent or live nearby, you may want to begin with the local office. If you are not a constituent, begin with a staffer in the Washington, D.C., office whose portfolio of responsibilities includes your topic of interest. Keep in mind that you are likely to meet with staffers much more often than with elected officials. Such meetings are often as productive as meetings with officials. As discussed earlier, referrals by individuals close to, or respected by, the office will help, as will working through a well-established organization (e.g., a boundary or advocacy organization).

Choose High-Impact Communication

There are many different modes available for communicating with policymakers. While there are no general rules for which mode of communication to select (e.g., “always call, never email,” or vice versa), personalized communication that reflects more than a few minutes of time investment will normally have a greater impact. Examples of low impact communication include adding your name to an online petition, sending an impersonal “email blast” to numerous offices, calling your Representative or Senator’s general Washington, D.C. number and giving an earful to the intern on the other end, or tagging a policymaker in a social media post. This is not to say that these quick communications are not worth doing, however, as offices do monitor general trends in support and criticism. Higher impact communication would include an email to, or phone call with, a staff member who handles legislation in your area of concern, any in-person meeting, and special events to which the policymaker is invited. Note that first meetings tend to be short, informal, and conversational, be on time, be flexible if a policymaker is late or called away, and bring a one-page document efficiently conveying your key points. Once you have developed a relationship with an office, you may be asked to help them persuade other policymakers. You may be asked to brief other offices, testify at hearings, or assist with “Dear colleague” letters or letters to federal agencies. Similar rules apply to the executive branch, although there you have an additional formal opportunity to weigh in: federal agencies are required by law to field comments from the public on proposed rules during a “public comment period.”

Time Your Communication

Every policymaking body operates on a specific schedule, and it is critical to be aware of it. For example, the U.S. Congress is sometimes in session and sometimes out-of-session; the schedule is put together, and published, at the beginning of each year (though it can change).

If time is not of the essence, out-of-session can be the best time to seek a meeting: the pace of the members’ and staffers’ schedules will slow somewhat. Note two important details, however; during recesses, most members of Congress will be in their home district, not D.C.; also note that many staffers take their vacations during the longer recesses. There are other schedules that may impact the timing or content of interactions. Elected officials likely will not be available for nonessential meetings in the several months before an election (if it is a competitive one); however, some staff may be. Remember that Representatives are up for election every two years; Senators every six. It is helpful to understand the timing of the appropriations process as well, which typically begins in February and can continue throughout the year, or be completed at different times for different clusters of agencies. Finally, every piece of legislation has a life cycle: to shape the policy, share important information early—ideally as it is being drafted. Once legislation has been reported out of committee, your efforts are less likely to have a significant impact. Finding out when legislation is in its beginning phases requires some time investment. You can monitor relevant committee activity via Congress.gov, follow publications and policy-related alerts (such as the AAAS Policy Alert) from a scientific society, or draw on relationships with advocacy organizations or Congressional offices.

8 For example, see Frances Lee’s Insecure Majorities (2016, Chicago), Martin Gilens’ Affluence & Influence (2012, Princeton), Benjamin Page, Jason Seawright, and Matthew Lacombe’s Billionaires and Stealth Politics (2019, Chicago), and Lee Drutman’s The Business of America is Lobbying (2015, Oxford).

9 At both the national and state level, judiciaries also practice judicial review of laws.

Summary of Recommended Practices

Planning Ahead

Research Your Audience.
With whom should you communicate? What are their responsibilities, priorities, and background?

Work With Others.
Are there colleagues or organizations who have complementary expertise or more experience than you interacting with policymakers?

Consult Available Resources.
What advice or training is available from your employer, scientific society, or other organizations?

Practice and Get Feedback.
Have you role-played your meeting or asked a colleague or friend to read your written material?

Communication Goals

Identify and Articulate Your Goals.
Why are you communicating? What are you asking of the policymaker?

Communicate Shared Goals.
From the policymaker’s perspective, why should they spend time and resources helping you?

Communication Content

Practice Ethical Communication.
Is the information you are conveying accurate and does it reflect the breadth of quality work on your subject? Have you considered how your biases are influencing your communication?

Make Sure You Are Understood By Nonexperts.
Is your communication concise, well-organized, and jargon-free? Do you use concrete examples, narratives, and (where relevant) visual data displays?

Be Relevant.
Does your communication convey to the policymaker why they should care about the information you are providing? Have you selected examples and narratives that are likely to resonate?

Communicate Credibility.
Have you conveyed your expertise? Are your argumentative points well-justified and factual statements well-documented?
Summary of Recommended Practices

Social Aspects of Communication

Establish Trust.
Are you connected to an organization or individual known to, and respected by, the policymaker?

Build Relationships.
What natural connections—geographic, topical, or social—can you build on to foster a relationship with a policymaker?

Practice Respect.
Do you appreciate that your conversation partner is a policymaking professional with expertise in that arena and an interest in serving the public? Are you ready to listen to their perspective and exchange ideas?

Communicating In A Political Context

Are you aware of the varied influences the policymaker likely will take into account when making a decision in which you are invested?

Respond To Political Diversity Productively.
Are you considering opportunities for productive communication among those with whom you do not always see eye-to-eye? Have you thought through strategies for appealing to politically diverse audiences, including grappling with points of disagreement?

Practicalities When Communicating With Policymakers

Recognize Various Types Of Policymakers.
With what type of policymaker should you communicate?

Gain Access.
What is your strategy for getting the attention of a busy policymaker?

Choose High-Impact Communication.
How are you most comfortable communicating? Can you put aside time to make the most of whatever form of communication you have chosen?

Time Your Communication Well.
Is there a particular piece of legislation or other policymaker action you want to influence? If so, have you sought information on the timing of key decision points?