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Congressional Connections and Earth Science Literacy

When Congress is in session, a big part of my day is consumed by meetings. Like other aspects of life in Washington, D.C., meetings on the Hill have a faster pace compared to meetings on the “outside.” Seasoned congressional staffers seem to thrive on the often frenetic pace, and understanding how the process works helps keep many a lobbyist employed. In addition to other responsibilities, it is not unusual for legislative staffers to have six or eight 15- to 30-minute constituent meetings in a day, often back-to-back and sometimes overlapping.

By Friday night, the week can seem to have been just a flurry of handshakes and customary business card swaps, but, ultimately, the purpose of every meeting is the same: to identify connections. The connections that members of Congress seek are pieces of information that link stakeholder concerns to specific legislation (or sometimes to congressional oversight). The stakeholders may be constituents from the Congress member’s district or state, professional or trade organizations, businesses or entire industries, or the general public. The specific legislation may take the form of a new (or amended) law or simply an appropriation to fund an existing program.

In this respect, all meetings on the Hill are at least partly informational, but a successful meeting also involves an “ask”—a highly specific request that addresses the concern. The ask is the legislative equivalent of “what’s the relevance of what you are telling me?” that faculty members use to bedevil graduate students after research presentations. Without an “ask,” meetings tend to get lost among countless other distractions competing for members’ and staffers’ time. Asks may not always be politically palatable or even realistic, but at least they identify connections.

Geoscientists are stakeholders in this process—often as recipients of federal funding, but also as drivers of national policy on energy, water, natural resources, and climate change. Meeting with members of Congress and their staff is unquestionably an important activity for earth scientists. In fact, professional societies like GSA and the American Geological Institute (AGI) organize congressional visits for their members to help maximize their impact and visibility on the Hill. My predecessors and I have given detailed advice in these pages on how to communicate with Congress. In fact, the purpose of this fellowship is in part to provide a resource for colleagues across academia, industry, and government.

But congressional visits are not the only way to advance science policy. In terms of a lasting effect, collectively, scientists have a much greater impact on policy through other kinds of outreach. In a recent editorial in *Science* (13 March 2009), Christopher Reddy, Director of the Coastal Ocean Institute of Woods Hole Oceanographic Institution, argued that universities should provide more incentives for their scientists to communicate with policymakers, the public, and—*gasp*—the media. As accessibility to information and disinformation expands exponentially via the Internet, the responsibility of scientists to explain what they do becomes even more important. Reddy writes, “That doesn’t mean scientists need to be celebrities, politicians or lobbyists—just citizens.”

Geoscientists can impact science policy by helping the public identify important, but often less apparent, connections between society and the earth systems we study. By explaining the relevance of their scientific research, geoscientists help improve earth-science literacy, which would ostensibly make it easier to craft and pass legislation that directly or indirectly involves earth systems. This type of outreach can be done in a number of ways, in addition to directly lobbying Congress or giving interviews.

For example, the Earth Science Literacy Initiative (ESLI), a project funded by the National Science Foundation (NSF), recently released a community-based document that outlines the “big ideas” in earth science—the things every American should know. The document was developed, written, and revised by earth scientists with the goal of not only guiding educational standards but legislation as well by calling attention to the myriad connections among earth materials, earth processes, and society. The resulting framework parallels similar documents produced by the ocean, atmosphere, and climate science communities. The result: geoscientists can use these “big ideas” to both frame and explain the relevance of what they do to the public.

Despite the cumulatively slow pace of enacting legislation, it is clear that these kinds of connections are being made in Washington, D.C. The Obama Administration and majority leadership in both the Senate and House of Representatives have signaled that climate-change legislation must be directly and intimately linked to national energy policy. It remains to be seen whether combining every aspect of the two in a sweeping energy bill is politically prudent. At the time of this writing (April 2009), discussion has just begun on draft climate-change legislation authored by Representatives Henry Waxman (D-Calif.) and Edward Markey (D-Mass.).

Scientific connections are being made on a smaller scale in Congress, too. Senate Energy and Natural Resources Committee Chair Jeff Bingaman (D-N.Mex.) and ranking member Lisa Murkowski (R-Alaska) recently introduced S.531, The Energy and Water Integration Act of 2009. The bill represents unprecedented federal recognition of the nexus between energy production and water



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use/consumption in the United States. Among the provisions of S.531 are a congressionally mandated study by the National Academy of Sciences on the impact of energy development on water resources and a directive to the Department of Interior to set research priorities for the Brackish Groundwater National Desalination Facility in Alamogordo, New Mexico, including the integration of renewable energy with desalination technologies.

Whether we choose to recognize it or not, scientific research drives national policy. Regardless of how removed your research may seem from the halls of Congress, the cumulative results of scientific progress are the basis for many policy decisions. Geoscientists can influence the direction of those decisions from the inside as advocates and from the outside as grassroots educators. Perhaps helping the public and policymakers make these kinds of connections can demonstrate the value of programs like volcano monitoring—and maybe even without a karmic case-in-point eruption.

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