

## Weather, Water, and Climate: A Strong Positive Case for Support

**T**he science–policy interface comes in two basic flavors: science for policy (i.e., how science and services can improve societal decision-making) and policy for science (i.e., how decision-making on science can help us provide information and services to society).

The AMS community has a long history of engaging in science for policy. The information and services we provide contribute directly to society’s well-being, and we want to help people realize the potential benefits that knowledge and understanding of the Earth system makes possible.

Increasingly, members of our community also show an interest in policy for science. This increasing attention reflects both concern over ongoing cuts in federal support and growing recognition that potential advances in our science and services offer tremendous new opportunities to the broader society.

Done thoughtfully, efforts to improve policy for science have the potential to increase support and resources for our science and services. This would enable our community to provide the information and services the nation (and the world) needs to manage risks and realize opportunities associated with weather, water, and climate.

Here are three suggestions for those of you interested in advancing policy for science to consider as you develop your engagement strategies.

First, focus on creating a strong positive case for support. This sounds obvious, but sometimes members of our community emphasize a negative case against someone else’s science. Over the past year, I’ve heard members of our community call to redirect funding from climate to weather, for observations instead of modeling, for science instead of services, and for applied research instead of basic (i.e., interest-driven) research.

These are weak and counterproductive arguments for support. Have you ever applied for a job by trashing the other applicants? Would you consider hiring someone who did? Has your company won a contract by denigrating the competition? As a student, did you choose your program because they convinced you the other schools were subpar?

No chance. If the strongest case for something is that it is the best among a poor set of alternatives, then the case for support is exceedingly weak. To the extent that such a negative argument is effective, it means that resources would be best applied to none of the options and instead redirected in an entirely new direction.

In contrast, the case for Earth observations, science, and services, particularly relating to weather, water, and climate, is extremely strong. The expansion in knowledge and capabilities that result enable society to manage risks and realize opportunities associated with the Earth system.

Second, focus on pursuing a strong positive outcome. Again, this sounds obvious, but members of our community sometimes seem to call for, or validate, cuts in federal investments for science and services. We sometimes hear that “We will have to do more with less” and that “If we don’t help decide where the cuts will occur, then someone will decide for us.”

It’s not our job to cut the federal budget. It’s not our job to set priorities for federal spending. It’s not our job to make those whose job it is to do those things feel better about poor choices they make.

Our job, in my view, is to help make sure that policy makers understand the implications of the choices that they make. Cutting funding for science and services relating to weather, water, and climate will harm society’s disaster preparedness and response capabilities. Increases in funding for our science and services will almost certainly create new business opportunities and enable social and economic advancements that could not otherwise occur. That is a strong positive case for a strong positive outcome.

Finally, when engaging the policy process it is important to combine humility with confidence. Policy and politics are complex and challenging. Relationships are critical and incentives operate on numerous scales and cut many ways. While political discussions don’t always seem to make sense, they can be very rational in ways nonexperts don’t realize if they don’t understand the incentives elected leaders face. Given this complexity, even seasoned veterans of the policy process recognize the need to be humble in engaging with decision makers. But

that's only half the story. Members of our community also possess expertise and skill that the policy process desperately needs. We have insights and understanding relating to major societal challenges, and our technical knowledge and training provide us with analytical capabilities and problem-solving skills that are extremely rare. When we bring these to the policy process, particularly when we recognize the limits of our expertise, we can help bring about major improvements in policy.

As a result, thoughtful engagement with the policy process has the potential to help secure the support and resources that our community needs to make critical information and services available. More importantly, constructive interactions with the policy process can help ground societal decisions in the best available knowledge and understanding. That will help the nation, and the world, avoid risks and realize opportunities related to the Earth system.

—PAUL HIGGINS, AMS POLICY PROGRAM DIRECTOR