Legitimacy in Scientific Assessments and the Expression of Community Opinion

There is great need for the scientific community to effectively and credibly communicate with the broader society. This can include assessments of scientific understanding, providing services that use scientific knowledge for societal benefit, and expressions of community priorities or appropriate response options (i.e., what "should" happen).

The value and impact of such efforts depend on the legitimacy of the processes used to generate them. In broad terms, the legitimacy (and power) of views expressed by any group is enhanced through processes that ensure

- the full range of credible and defensible views contained within the community are fully and fairly considered;
- relevant external views are sought and considered fairly;
- minority-held views are sought and, when credible, included;
- all participants have an equal opportunity to contribute; this is not the same as saying all participants will contribute equally because . . .
- . . . all suggestions are assessed and included (or excluded) based on their merit (i.e., their substantive contribution to the assessment's validity);
- views expressed are free from self-interest to the maximum extent possible;
- any notable remaining self-interest is identified explicitly and clearly within the assessment (i.e., full disclosure);
- the potential for participation bias is recognized and accounted for (e.g., if those most likely to participate do not reflect the full range of credible views);
- the group possesses (or has access to) sufficient subject-matter expertise to fairly and accurately assess all relevant information;
- opportunities for broader community input and review are included to the extent possible (e.g., member/public comment periods);
- independent validation and oversight occurs when possible;
- criticism and dissent are welcome and encouraged;
- scientists wishing to provide criticism or dissenting views are able to do so in ways that guard against potential retribution or the perception of it;
- the process and deliberations are as transparent as possible;
- hard choices and sacrifices do not involve nonparticipants in the process (i.e., such calls are not credible);
- assessment efforts are led by a credible, trusted, and capable source (i.e., individuals and institutions committed to the principles articulated here and capable of ensuring they are met to the maximum extent possible)

Not all activities can or need to include each of these bullets, but the spirit captured by this list is a prerequisite for communication and outreach efforts on behalf of the scientific community.

Contrast the approach suggested by this list with courtroom advocacy in which opponents try to present the strongest case on behalf of their clients and leave it to the other side to make the counterarguments. That is a biased approach that does not seek to provide a full or objective assessment of the evidence.

The principles outlined in the list above are well established throughout AMS activities. The value of AMS meetings and journals rests, in large part, on the legitimacy they gain from being open, unbiased, and well-vetted by subject-matter experts. AMS statements (www.ametsoc.org/policy) include numerous checks, including the reliance on subject-matter experts, independent oversight by the Council, and vetting from the broader community through open member comment. Similarly, the AMS Policy Program tries to implement these principles throughout our activities, most notably in the studies, research, and analysis that we conduct (all of which are available here: www.ametsoc.org/studies).

Recently, some in the AMS community have called for new approaches to enable our community to "speak with one voice." This is a great goal because unified messages about scientific understanding or the views contained within the weather, water, and climate community carry serious weight. But the process of developing a unified message that includes and

appropriately weights all voices is not easy. Legitimacy is earned, not given.

New efforts on behalf of our community will succeed to the extent that they establish processes that promote legitimacy. Careful planning can help ensure these efforts measure up to the principles outlined above. If they do, those efforts can avoid sacrificing legitimacy in pursuit of speed or message clarity and enhance the power and effectiveness of our community's communications.
—Paul Higgins, AMS Policy Program Director