

# Speaking With People in Our Profession

## An interview with Lori Hiding

**L**ori Hiding is the managing director of the Consortium for Science, Policy & Outcomes (CSPO) at Arizona State University (ASU), having joined CSPO when it moved to ASU in July 2004. She oversees operations at CSPO and participates on the Science Policy Assessment and Research on Climate and the Sustainability Project teams. Prior to joining CSPO, Lori was a program manager with the Ecological Society of America's Sustainable Biosphere Initiative Science Program, where she was responsible for managing a number of projects that sought to develop or define the science of ecology to inform management and policy decisions. In addition, she participates in the Sustainable Rangelands Roundtable, for which she serves on the steering committee and chaired the outreach working group. She also served as chair of the Society for Range Management Nominations Committee. Lori received her Bachelor's of Science degree in Zoology from the University of Maryland and her Master of Environmental Management degree in Resource Ecology from Duke University's Nicholas School of the Environment.

### We Need Better Translations of Our Science

*Question: Where do you currently see the most solid connections between science and policy?*

Answer: Actually, science and policy seem to be more commonly linked in the applied science areas, including rangeland science, where users of science-based knowledge are often directly linked to science through their involvement in decisions about what needs to be investigated. These links work when there is a dialogue between users, including policy types and scientists, and where that dialogue can craft research directions. Having a dialogue process in

place, but not using that process, as may be the case with federal management agencies, doesn't work.

*Are there some specific examples you can cite where this dialogue is working?*

Yes, I have seen effective linkages where individual scientists are working directly with users over time in developing this dialogue. A good example is in the rangeland health subject area where specific scientists have worked over time with users to establish links between science and policy. This takes considerable time, but it may be easier to work these linkages at this "local" level. This may be due to the interpersonal relationships and trust that develop, compared to the potential distrust in the federal process.

*Can we have large-scale, national dialogues?*

Yes, but it takes a huge commitment. As part of CSPO's Center for Nanotechnology in Society, we have had, for example, a national citizens' technology forum on nanotechnologies for human enhancement. Across the country we worked to create discussions among the public and scientists involved in these technologies, and these discussions continued after these meetings to coalesce ideas. Of additional importance, these public user groups were able to provide scientists with feedback on their work and its impacts. The next step will be to connect this process to policy. Yet, this is only one example and while it, like similar efforts, was distributed geographically, the number of citizens and scientists who participated was still limited. We are going to need much more effort to see these kinds of connections between scientists and users on many other topics.



Lori Hiding.

*Why is it so difficult to connect science and policy?*

I see two main reasons for this disconnect. First is the way scientists try to interact with policy makers. They need to improve their communication skills, and to understand what policy makers need in order to do their work. Scientists need not only to describe what is known about a subject, they need to help characterize, based on that knowledge, the array of options available and the possible outcomes and consequences of those different options. They do not need to advocate for a particular policy, but to communicate what we scientifically may know about options and outcomes. Second, scientists need to understand that there are many non-science factors that influence policy. Policies are not driven by the science, not only because science-based knowledge is incomplete, but because there are other realities influencing policy decisions.

*How should scientists be communicating with policy makers?*

They need to start with an understanding of what policy makers are up against on any particular issue. Only occasionally do you ever see policy makers and scientists agree on programs that help further this understanding and the resulting dialogue. Scientists need to listen to policy makers describe the parameters of their dilemmas. Then they can understand how to frame and describe their science-based knowledge and research agendas so those communications are relevant and effective.

*The scientific literature doesn't generally accomplish this?*

No, the scientific literature contains information directed from scientists to scientists. We need better translations of

our science. Again, we need the scientists to understand the dilemmas, and then to more appropriately describe the science based options and outcomes as they are currently understood. The literature is very important, but we also need the well-written syntheses of that literature presented in a fashion that can be used by policy makers.

*Yet, more than one-third of the US public thinks that current life on earth has always existed in its present form. How do we overcome an anti-science, or at least an almost non-acceptance of basic, science-based biological principles in a significant portion of our society?*

I think scientists are held in very high esteem by our society. Society is not anti-scientist, nor is society incapable of understanding this information. Part of the problem, though, is that our education system teaches science in a manner in order to create scientists rather than to create an understanding of science. There is a difference. It is not that science is disregarded in our society, but that people's values are critical in any issue, and those values can override other concepts. Scientists have to work to bridge science principles with people's values, in the same way that scientists work with their concepts within their own value systems.

In the end, policy debates are not debates about science as much as they are debates about values. Scientists need to better understand this reality.

*We should not be surprised that current science debates, such as the debate about global climate change, are so embedded in conflicting values?*

No, we should not be surprised. We need to acknowledge that this debate is heavily constrained by values. As long as the debate is focused on atmospheric models we will not move ahead. We have fought about the causes of climate change, confounding the debate with conflicting values and without focusing on the changes that are occurring. In order to move ahead we need to focus on various mitigation (beyond emission reduction) and adaptation options. We need to make the dialogue about the realities of mitigation, recognize the underlying values, and develop realistic strategies to adapt to these changes.

*You still hold out hope that scientists are "trainable"?*

Yes, but it is more of an "awakening" leading to a cultural change. Working with scientists to have them re-think their role in society is a component of CSPO's mission. We are working with science and engineering graduate students to provide them with the background and tools to consider the societal and policy implications of their own research. This has included taking a group to Washington, DC to learn what happens in the "black box" of science policy,

supporting PhD science students to add a chapter to their dissertation on the societal and policy impacts of their work, and teaching graduate seminars on science policy for scientists. In general, graduate students seem more open to making the nonlinear connections between science and policy, perhaps because they are still learning how to define themselves as scientists, and so exploring these connections does not violate their conception of what “scientists” are.

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— Announcement —



**Development of Comprehensive Grazing Policy Guidelines:  
A Case for Adaptive Collaboration within the Rangeland Profession  
A Symposium at the 2009 Annual Meeting  
Tuesday, February 10, 1 pm - 5pm**

The rangeland profession requires a comprehensive set of grazing policy guidelines representing the needs and perspectives of multiple stake holders. These guidelines should consider all forms of knowledge, including scientific, experiential and local, along with ecological and socio-economic considerations. A major obstacle to development of these policies guidelines is disagreement among rangeland professionals regarding the benefits of intensive grazing systems relative to continuous, or season long grazing. This long-term debate partially results from limited dialog among various fractions of the profession and it emphasizes the need to develop an approach to resolve major controversies. The objective of this symposium is to develop a framework for promoting objective dialogue regarding grazing systems within the profession.