

Better scientific policy decisions start with knowing facts from values

12 August 2013

When gathering public input on policy questions, scientists can speak with authority about facts, but must remember that everyone is an expert when it comes to values.

"Using climate change as an example, a scientist could say, 'The climate is changing.' That's a fact that can be checked," said Thomas Dietz, a member of the MSU Center for Systems Integration and Sustainability (CSIS) and professor of sociology, [environmental science](#) and policy, and animal studies. "But if a scientist says, 'We need to take these actions to halt [climate change](#) because it's affecting what people care about,' that's a value. And scientists have no more authority to speak about values than anyone else. Everyone is qualified to speak about values."

The paper, "Bringing values and [deliberation to science communication](#)," is published in the most recent issue of the *Proceedings of the National Academy of Sciences*.

Because they are conducting the science, scientists are highly qualified to speak about facts. But when offering solutions to scientific problems, scientists must be careful not to present values as facts because they may lose their credibility, according to Dietz, who also serves as vice president for environmental research at MSU.

"Most federal and state agencies are required to get public input to inform decision-making on a number of scientific issues, ranging from global warming to [wild horse](#) management," Dietz said. "The process of making decisions always involves both facts and values, and the differences between the two need to be made very clear in science communications. Some philosophers argue it's hard to distinguish between facts and values, but I think for practical purposes we can and when we are discussing policy we should try hard to make that distinction."

What science can do, Dietz says, is help figure out what people's values are and then work to come to agreement or [disagreement](#) on them.

"It's much safer to have a debate about facts than about values," he said. "Facts can be proven. When you're debating values, it's almost like calling someone a bad person if you speak negatively about their values. We need to learn how to talk about values in a constructive way. As a society, we have to have these discussions so we can decide how to move forward and address scientific issues. But there is no one-size-fits-all solution."

Instead, Dietz recommends agencies diagnose the situation and then make a plan that allows for all viewpoints to be heard and considered. It's also important to begin public participation early, when a study is being designed, not just when it's being concluded.

"Sometimes people are concerned about an issue that research can easily resolve," Dietz said. "This makes people believe in science more and gives the research more credibility."

More information: Bringing values and deliberation to science communication, www.pnas.org/cgi/doi/10.1073/pnas.1212740110

Provided by Michigan State University

APA citation: Better scientific policy decisions start with knowing facts from values (2013, August 12) retrieved 21 October 2019 from <https://phys.org/news/2013-08-scientific-policy-decisions-facts-values.html>

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