

# Politics, not ignorance, may pollute support for pro-science solutions

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Mentioning politics in a message about an environmental issue may turn people—even people informed about the issue—away from supporting a pro-science solution, according to a team of researchers.

In a study, conservative participants who were asked to react to a message about excess [water runoff](#) showed lower support for an environmental science improvement project when the message was framed around [global warming](#) terminology, according to Lee Ahern, associate professor of advertising and [public relations](#), Penn State. The effect was even stronger among those conservatives with more knowledge about the issue, he added.

"It's the framing of the issue that's really important," said Ahern. "This is really a message for scientists and science communicators: don't pollute and politicize the information environment around the issue, because once you do that, people's political identities are going to get engaged."

This study, along with others, has established that having more knowledge about science does not necessarily translate into more support for pro-science policies, according to Ahern, who added that, in this case, the environmental solution was to add more green surface infrastructure, such as green roofs.

The researchers, who report their findings in a recent issue of *Science Communication*, suggest that a reader's political and social identities can be activated when politicized terms or concepts are used in a message.

This activation may then cause people to withdraw support from solutions they may have backed.

"The issue with the public's support for pro-science solutions for things like global warming, in particular, as well as other environmental issues that have socially contested policy solutions, is that the political identity of the people who are thinking about these issues often becomes activated," said Ahern, who worked with Colleen Connolly-Ahern, associate professor of advertising and public relations, Penn State and Jennifer Hoewe, assistant professor of journalism, University of Alabama.

Ahern said that all political ideologies, not just conservatives, are susceptible to this type of motivated reasoning.

"This is not unique to conservatives," said Ahern. "It works both ways. Studies have been done on other issues, for example, nuclear power and genetically modified organisms, that have shown similar effects among liberals."

The researchers suggest that scientists hoping to reach consensus on solutions should avoid political rhetoric in their communication.

"This is really a message for the scientists, not necessarily the public," said Ahern. "It's interesting for people to understand what's happening, but the people who really need to change what they are doing are the scientists and science communicators."

The researchers recruited 964 participants to take an online survey on local water quality in the Philadelphia area. The participants were asked what political party they supported and how strongly they supported the party. They were also asked to respond to questions that would group them into a range of egalitarian-hierarchical or individualist-collectivist

worldviews.

The researchers measured the participants' knowledge of storm water runoff issues in Philadelphia and also used a quiz from the National Science Foundation to test their general science knowledge.

The study had two conditions. A normal condition attributed the water runoff problem to excess rain, while the global warming condition framed the problems around climate change. Statements and phrases, such as "stopping global warming will require international agreements" and "human-caused global warming," were used to frame the subject around climate issues.

Among solid or strong Democrats in the global warming condition, participants with high knowledge reported stronger willingness to pay for environmental solutions, such as adding [green roofs](#). Solid or strong Republicans with high knowledge, on the other hand, reported stronger support in the normal condition for the environmental solutions, but not in the global warming condition. They were even more resistant to the solutions than low-knowledge Republicans.

"In fact, support among the low-knowledge Republicans increased in the global warming condition," said Ahern.

Provided by Pennsylvania State University

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