

Scientists need to be more proactive, effective at public communication: report

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Scientists are a valuable and trusted source of information, researchers say in a recent report, but too often do an inadequate job of bringing that information to those who need it in a factual, non-technical, credible and neutral format.

An analysis of science communication as it related to the establishment of "[marine reserves](#)" off the California coast offers insights into a more broad-based, sophisticated and effective communication strategy - one that could and should be adopted more widely, the authors said.

The report, in a recent issue of [Proceedings of the National Academy of Sciences](#), outlined a comprehensive communication strategy that might be applicable not only to marine reserves but other areas of science and natural resource management.

"More effective communication is badly needed at almost every level of science," said Kirsten Grorud-Colvert, a research associate in the Department of Zoology at Oregon State University. "It doesn't have to be expensive, but we have to get out of the ivory tower, away from our scientific jargon and work more closely with our various audiences."

The researchers noted in their report that scientists who see communication as a top-down transmission of information run the risk of alienating key audiences.

Those audiences, they said, include resource users, local and national

interest groups, communities, land and resource managers, political leaders and the general public. These groups are diverse; some are well-informed and others less so. They have a wide range of values and opinions, and no single form of communication will be most effective at reaching all of them.

But scientists must try to transcend what is often a combative and politicized atmosphere in resource management discussions, the researchers said, and work to base their statements on peer-reviewed data. They also must present their findings impartially in order to build trust.

A comprehensive approach to communication used in the successful establishment of marine reserves in the Channel Islands and along the California coast offers insights useful elsewhere. Among the steps that were used:

- Scientists worked to "know the audience," identifying the various group needs, levels of expertise and background, and using that to tailor communication efforts.
- A few "main messages" were identified, such as identifying the problem, why it should matter to the audience, what actions are needed, and what benefits would derive from those actions.
- A diverse range of communication approaches were used, ranging from printed materials to web sites and small group presentations.
- Efforts were made to identify and track the success of the communication strategy, based either on accomplishing a specific goal or measuring the increase in understanding among

target audiences.

In this example, an educational booklet and film titled "The Science of Marine Reserves" was developed, with input from both marine ecologists and [science communication](#) specialists. More than 10,000 of an updated version of the booklet have been distributed to 57 countries. And since its launch in 2008, 600,000 visitors from 220 countries have visited the content on a web site titled "Protect Planet Ocean."

Not every science [communication](#) effort may be this ambitious, Grorud-Colvert said, but as funding for science becomes more competitive, there's an increasing demand to make it more relevant to public issues and meet funding agency requirements for outreach strategies to communicate the findings.

"Being willing to participate in the public forum and investing time is a big part of this," she said. "A lot of scientists just aren't used to that. But these are important issues and we all need to do a better job of communicating about them with honesty and credibility. We need to help people understand what's known, what isn't known and what's still being debated, and build trust in the process of science."

Provided by Oregon State University

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