

# Political will

Scientists who enter the world of political advocacy stand to gain perspective but could face a culture shock. **Gene Russo** reports.

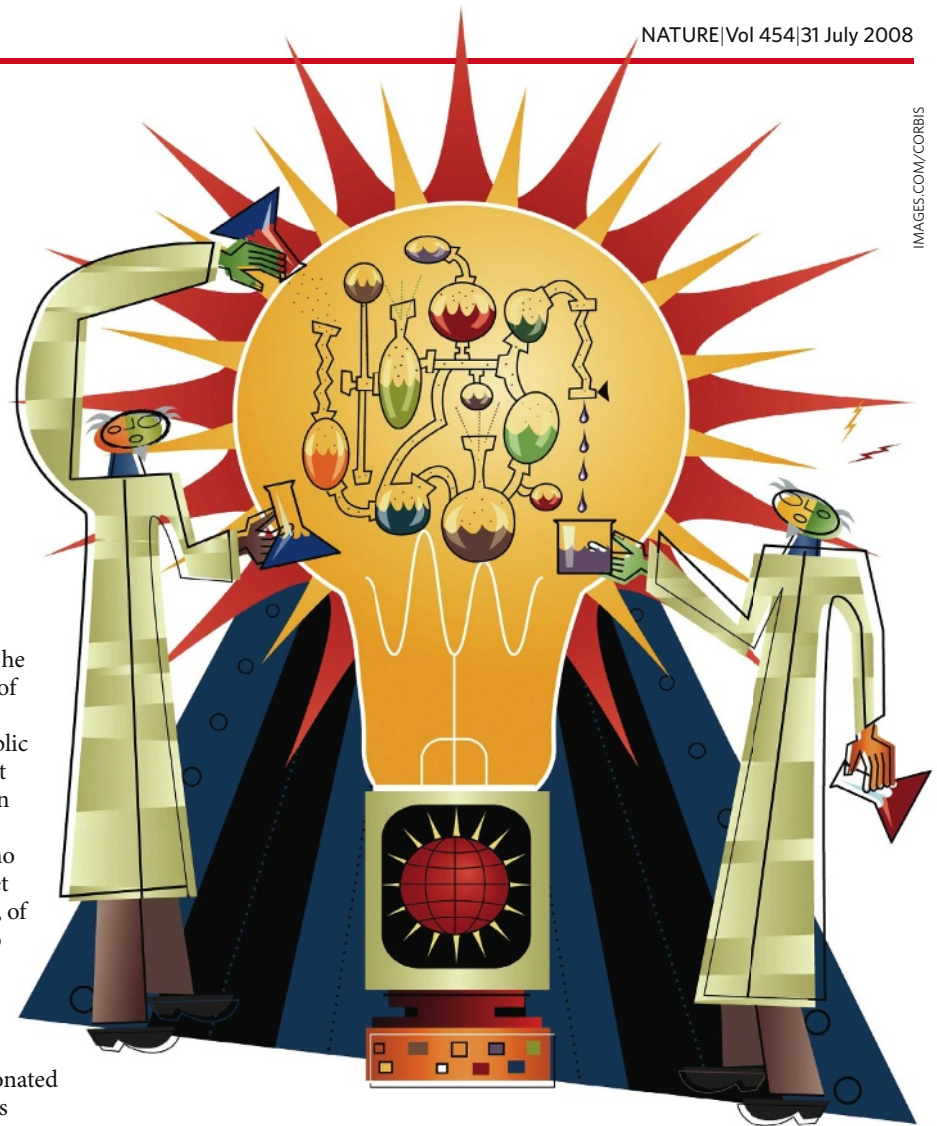
**W**hen climate scientist Dave Reay of the University of Edinburgh, UK, first appeared before a parliamentary select committee he was rather intimidated. He sat in a grand House of Commons room before a group of distinguished Members of Parliament (MPs), and a packed public gallery. Behind him sat one of his idols, naturalist David Attenborough. The room went quiet. Then came the first question from the chair: "What would your advice be, as the author of a book who has addressed this subject, in terms of how we get the citizens certainly of this country and, indeed, of other jurisdictions, involved in a practical way to address the climate change agenda?"

It was December 2006 and Reay was at the meeting to talk about what role everyday households could and should have in mitigating climate change. It was a sensitive subject that resonated with the public, and Reay had to choose his words carefully. He quickly learned the nuances of answering questions without going beyond the boundaries of his area of expertise (see 'Tips for science advocacy').

## Clash of cultures

Whether driven by curiosity, self-interest or civic duty, many scientists like Reay dip into the world of advocacy and politics. Roles range from occasional letters in local newspapers to education sessions with policy-makers, to professional lobbying (to represent the interests of science institutions) or even elected office. Often these roles require the understanding of subtle principles of governance and policy-making. And often they mean a clash of cultures between science and politics — two disciplines whose modus operandi differ despite their many mutual interests. Those who enter the advocacy or political arena can expect frustration, occasional victories and a variety of challenges related to communicating science and understanding how policy-makers perceive it.

"There are risks involved in putting your head above the parapet, being seen as someone supporting a government policy or giving advice that others might disagree with," says Reay. President George W. Bush's rejection of the Kyoto Protocol is what pushed Reay to step in. He felt a responsibility to educate policy-makers about climate data, rising temperatures and the implications for the planet. He remains a full-time scientist and part-time advocate. The minor celebrity that came with his book *Climate Change Begins at Home* (Macmillan, 2006) has led to question-and-



answer sessions with select committees, and he has written synthesis papers for the UK and Scottish parliaments, including a summary of the main points of the Intergovernmental Panel on Climate Change's 4th assessment report.

Some UK scientists participate in an 'MP pairing' programme that matches a scientist and an MP so that both may learn from each other. The Parliamentary Office of Science and Technology takes PhD students for three-month stints to help inform the office's science-policy advice to Parliament.

## Delicate balance

Even in these seemingly innocent pursuits, scientists should tread carefully, say those familiar with the two worlds. Scientists are sometimes over-confident that scientific evidence will be the guiding principle in political decision-making. They may not fully appreciate the other economic and social factors affecting policy negotiations. And they may not wish to support a flawed initiative in order to win associated funds for more promising research.

Catherine Rudder, a professor of public policy at George Mason University in Arlington, Virginia, goes further. There is a real danger, she says, that scientists who step onto a political battlefield without understanding the issues and positions could be unwitting pawns in a game they would prefer not to play. Rudder, former executive director of the American Political Science Association, says the ends



Dave Reay has offered advice on climate change.

justify the means in politics. A scientist's authoritative, expert voice could be used by politicians to serve their own agenda.

This means that scientists providing testimony should be careful to not overstep their expertise. "You want to stay in the area where you're expert," says long-time science lobbyist Joel Widder, a member of Lewis-Burke Associates in Washington DC. "Stay in the science box." His firm's clients include universities such as the California Institute of Technology and the private stewards of national laboratories such as Fermilab's Fermi Research Alliance. He says that scientists should remain the "smartest people in the room" on the topics they engage in with policy-makers. They stand to lose credibility if they get into a debate on economic or policy issues they may not fully understand, he says.

A common tip for full-time scientists is to do some advocacy through their scientific society, which is already well-versed in science-policy machinations.

### Smartest in the room

Perhaps the biggest challenge is learning how to communicate complex scientific findings in clear, coherent and concise ways. Scientists who engage with political staff or legislators must know their audience, cautions Mike Holland, an analytical chemist turned policy analyst who has worked on the US House Committee on Science and Technology and the Office of Management and Budget. That audience could be as unsophisticated as a 20-something political-science graduate with little science education. Widder advises his scientist clients to pretend they are addressing readers of *The Wall Street Journal*: smart and well-read, but not necessarily familiar with the details of science.

In the United States, scientists have several options. Many societies sponsor congressional fellowships through the American Association for the Advancement of Science. These place scientists with representatives or senators, sometimes leading to a fully fledged policy or advocacy career. Interested scientists might also offer to help their university's government affairs office raise the institution's profile and vie for scarce funds on Capitol Hill.

Those wishing to dabble rather than devote an entire career might try the recently started Science, Health and Related Policies network founded by the non-profit Scientists and Engineers for America (SEA). The network has a web page for every member of Congress and senator, with their contact details and stances on science-related issues. The SEA has also started to form graduate student chapters at a few universities.

For scientists looking to have more influence and perhaps launch a political career, the advice seems simple: form partnerships and build relationships. Holland recommends that scientists should turn themselves into a resource for a local politician, explaining complex science issues. Young scientists can try volunteering with a campaign in their area, suggests physicist Michael Lubell, director of public affairs at the American Physical Society. His involvement in political campaigns stretches back to Lyndon B. Johnson's successful presidential campaign of 1964. Those who take part in winning campaigns may end up being reliable sources for advice on issues such as air quality or water treatment. European MP Malcolm Harbour says the European MP pairing programme — modelled

## TIPS FOR SCIENCE ADVOCACY

- Know your audience. Communicate your science in a clear, concise but intelligent manner.
- Consider other implications aside from just the budgetary — how should the science initiatives be prioritized?
- Recognize the perceptions of different fields and disciplines — for example, some US congressmen have a negative view of scientists associated with environmental groups.
- Be aware that explicit advocacy activities, especially if allied with a certain political party, could cause some tension with colleagues who disagree.
- Be careful when reaching outside of your area of expertise. Don't be afraid to state the limits of your knowledge on a subject.
- Consider advocating through a science society that knows the issues.
- Recognize that a full-time career move to advocacy could affect your prospects for returning to research.
- Recognize that other factors, such as values, jobs and economics, play into science policy. Laws rarely grow out of scientific evidence alone.

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on the UK version — has both opened participants' eyes to the complexities of governance, and opened his eyes to the complexities of managing massive science projects.

But to succeed at any level, researchers need to enjoy what can be a tedious process with many failures and false starts, says Geoff Mumford, director of science policy for the American Psychological Association. Research offers the satisfaction of generating peer-reviewed publications after years or months of hard work. But science advocates aiming for improved legislation or new initiatives may end up with nothing, time after time. "You have to enjoy the process and the strategic planning involved," Mumford says.

### Negative connotations

Any scientist who gets involved should be aware that the label 'advocate' or even 'political adviser' is not without its negative connotations. Brenda Ekwurzel studied climate variability as a professor at the University of Arizona in Tucson before deciding in 2004 to join the advocacy group the Union of Concerned Scientists, based in Cambridge, Massachusetts. Although she focuses on education more than advocacy, she concedes that returning to full-time research would be difficult, both because she has lost touch with the latest literature and because of the stigma attached to advocacy organizations. An academic position combining science, policy and politics might be a possibility, she says.

Lubell has managed to do some physics research while serving as an advocate, only recently taking a break for reasons unrelated to politics. "If you're a serious scientist, if you have a strong science reputation, I don't think anyone will accuse you of being affected by the politics," he says.

Reay believes his academic peers and superiors support his participation in politics, although he receives no official credit. But what if one's views differ radically from the science establishment's? "You could also destroy your career," he says with a chuckle. "It does depend on what you say."

**Gene Russo is editor of *Naturejobs*.**



**Taking care:** Brenda Ekwurzel (top) and Catherine Rudder.

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