

# World view



By Daniel Swain

## Support climate scientists in engaging the public

**Scientific institutions must create roles so that researchers can provide the deep public engagement needed to respond effectively to the escalating impacts of climate change.**

In the early morning of 16 August 2020, the first lightning strikes arrived, and with them the e-mails and phone calls. Over the next 3 days, more than 10,000 lightning strikes from ‘dry’ thunderstorms ignited hundreds of wildfires in California. In the days and weeks that followed, California was besieged by an unprecedented sequence of events. The largest fires in modern state history triggered mass evacuations from walls of flame. Near-apocalyptic smoke pollution rendered the skies above San Francisco a dystopian orange – and caused thousands more deaths than expected for the time of year.

That month, I put my research and other responsibilities on hold to engage fully with the crisis. In a matter of weeks, I did more than 100 interviews with television, radio and newspaper outlets, and walked a social-media audience of millions through the disaster unfolding in their own backyards. Once the short-term emergency had passed, I briefed decision makers at local to national levels on the causes and context of the crisis, and its long-term implications.

In the years since, having a foot firmly planted in both research and public-engagement worlds has been crucial. I’ve worked with colleagues to design and publish studies on wildfire and strategies to mitigate its risks to address questions arising from my interactions with policymakers (D. L. Swain *et al. Commun. Earth Environ.* 4, 340; 2023). As a climate scientist-communicator, August 2020 was neither the first nor the last time that I’d dropped everything at a moment’s notice to engage with the wider world.

More such roles are urgently needed. This year has seen record-breaking heat and extreme-rainfall events globally, and that’s just a preview of what is likely to come. Already, I often take calls and give media interviews all day and sometimes straight through the night, because there simply isn’t anyone else available. I estimate that I spend more than 1,100 hours each year, the equivalent of more than 6 months of 8-hour working days, on public-facing communication.

More climate scientists clearly want to do this work. There is a highly motivated and diverse pool of talented researchers who would make excellent scientist-communicators. I regularly receive messages from early-career scientists, undergraduates and secondary-school students, who ask me how my dual role came to be and how they could fill a similar niche. Yet I struggle to give them specific advice because, at present, there is no clear or replicable path.

Institutional support is the missing piece of the puzzle.

**Institutions should make serious investments to create and support flexible climate-science roles that blend research and engagement.”**

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Research institutions and funders have often voiced support for increasing public outreach and community engagement by climate scientists. But tangible support has been sparse or non-existent. Public engagement is often treated as secondary to research, teaching and administrative duties. Sometimes these priorities are mentioned explicitly, but often they are indirectly reflected in everything from federal-agency funding calls to performance assessments.

I’ve been very fortunate to find support, but maintaining it requires continuous justification to institutions and funders, and involves cobbling together disparate funding sources. Even as I write this, it’s unclear whether there will be funding to extend my present role beyond the next six months. Many scientist-communicators have encountered the same struggle.

It’s often worse for scientists from marginalized groups, despite the urgent need for diverse climate communicators. Taking on poorly supported roles, especially if they invite public scrutiny and can incite harassment, is especially difficult for those who already face barriers to science careers. Diversity is crucial in climate engagement – both to make institutions more equitably represent the people most affected by climate change, and to expand the range of experiential knowledge that informs potential solutions. The status quo is neither sustainable nor scalable.

A sea change is needed at universities and research laboratories around the world, one that will require both institutional willingness and administrative flexibility. Institutions should make serious investments to create and support flexible climate-science roles that blend research and engagement, and that can respond rapidly to real-world events and public demand. Conventional teaching and service duties can interfere with giving short-notice media interviews and emergency assistance to government entities and first responders. Therefore, such positions would probably need to be distinct from conventional tenure-track roles.

Funders need to support this change by considering public and community engagement a core component of climate science. New programmes and calls for proposals specifically aimed at supporting a wide range of public-facing climate-change work will be key. Agencies must go beyond considering such activities as supplementary to research (for example, as the US National Science Foundation’s ‘broader impacts’ requirement currently does), and instead embrace them as a core part of the proposed work.

Climate scientists are ready and waiting to meet the communication and engagement challenges that the coming years will bring, and forward-thinking institutions and funders must urgently find the means to support them. Such support is essential if the world is to respond successfully and equitably to the climate emergency.