Political and Social Issues

Value of communicating global change biology in the media

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Abstract

Media interest in global change biology can help scientists find wide audiences for their work. In this editorial, I provide personal perspectives on science communication and tips for scientists on engaging with journalists to disseminate their findings.

Keywords: science communication; media; climate change.

Fresh water is essential for human life. The vast majority of human water use relies on surface waters worldwide, including for clean drinking water, agriculture, fishing, and shipping. Climate change and other extreme climate events have the potential to force a global water crisis in this century resulting from impacts on environmental and human health (Michalak 2016). Raising awareness of the impacts of climate change on freshwater resources to a wide audience is crucial; engaging with the media is an effective way to do so.

My experience conducting interviews with media began as a child when I was a junior tennis player. At a young age, I learned the importance of distilling a grueling two- to three-hour tennis match into highlights captured in several sentences. Subsequently during graduate school, I volunteered as a science correspondent for a radio program called the “Green Majority”, Canada’s first environmental news show. In this role, I interviewed scientists, political scientists, and artists for their takes on environmental issues, and I learned valuable lessons on what makes for effective science

communication. As I matured as a scientist as a post-doctoral fellow in the Center for Limnology at the University of Wisconsin-Madison, my mentors stressed the importance of communicating research to the public and provided informal training. These varied experiences set the stage for the opportunities I would have to engage with the media as a professional researcher working on the impacts of climate change on freshwater resources. It has been phenomenal to meet so many people who care about the environment and are developing solutions to mitigate climate change. Journalists have the capacity to show the wider public the beauty and importance of lakes, which are at risk under climate change, in ways that scientists may not always be able to do.

Practical advice on science communication

Distilling hundreds of hours of research effort into a few simple sound bytes for use in a press release and a radio, TV, or print interview is a major challenge. First, most universities and institutions of higher learning employ science communication experts, who are usually happy to meet with scientists to provide advice. Together, you can craft a story and a press release about your research that focuses on 3–5 simple, clear messages that avoid jargon and complex details, and do not overstate your conclusions (Porter 2015, Girard and Weinstein 2016). Always keep your target audience in mind: What do THEY need to know and what will matter to THEM (Bultitude 2011)? Focusing in this way on the “big picture” and what your audience is interested in learning

will help you deliver a clear message. Second, the “message box” can be an effective tool to identify precisely what you hope to communicate (Figure 1). The “message box” consists of answers to 4 questions summarized in 1–2 sentences each:

- i) What is the problem?
 - ii) Why does this information matter to the listener?
 - iii) What are some solutions to the aforementioned problem?
 - iv) What are the benefits of resolving the problem?
- (Baron 2010).

Once you have prepared, edited, and submitted a press release, it’s time for you to have a little fun too! This is when you can engage with enthusiastic journalists on a topic about which you are passionate. Porter (2015) described prior to conducting interviews that listening to “Happy” by Pharrell Williams helped encourage an animated, positive personality during interviews to help convey scientists’ enthusiasm and passion for their research to journalists.

Quick response times and preparation are additional considerations for working with the media. Journalists often have quick deadlines, sometimes as short as several hours prior to publication, so communication may be rushed, and you may not have the opportunity to review the articles or interviews prior to publication. Carefully preparing and practicing key points using simple language that you are comfortable discussing with media may help avoid misunderstanding between scientists, journalists, and the public. I have also found that journalists care about tackling issues of climate change, so you can work together to refine your pitch to increase clarity and accessibility of your research.

Why engage the media on global change biology?

Climate change is a complex environmental problem that requires creative, multidisciplinary, and collaborative solutions. Communicating science through diverse media, including radio, newspapers, and television, spreads the message about how climate change affects access to clean fresh water for millions of people. Scientists hope that media engagement will help to galvanize individuals within our society to develop solutions to this highly complex environmental problem. In fact, the primary motivation of a majority of scientists across the world to engage in science communication is to raise awareness and inform the public about the scientific issues we really care about as researchers (Bultitude 2011). Besides, engaging in science communication can also help to improve scientific and grant writing, teaching and delivering presentations, and help form new collaborations, skills we need to develop to improve as teachers and researchers.

Figure 1. The “message” box – a framework that can be used for effective science communication (adapted from Baron 2010).

For me, sharing my love of science with new people has always been fun, and I enjoy inspiring a younger generation of scientists, particularly young women who might follow my example and pursue a career in global change biology. Communicating global change biology with the media has given me a lot of hope for the future of our planet. I am struck by the passion our community has for the environment and by all of the different creative, collaborative, and multi-disciplinary ways individuals contribute to leaving the world a better place. I truly believe that by spreading the results of our work, for example by engaging the media, we will together find solutions for crises stemming from global climatic change within our lifetimes.

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References

- Baron, N. 2010. *Escape from the Ivory Tower: A guide to making your science matter*. Island press, Washington, USA.
- Bultitude, K. 2011. The why and how of science communication. Pages 1-18 in Rosulek, P., editors.

- Science Communication. Pilsen, European Commission.
- Weinstein, A. 2016. The importance of broadening science communication. Nature jobs blog: <http://blogs.nature.com/naturejobs/2016/11/21/the-importance-of-broadening-science-communication/>.
- Michalak, A.M. 2016. Study role of climate change in extreme threats to water quality. Nature 535: 349-350. [CrossRef](#)
- Porter, E. 2015. Science communication: Science in the media. Nature jobs blog: <http://blogs.nature.com/naturejobs/2015/07/08/science-communication-science-in-the-media/>