GUEST EDITORIAL: COMMUNICATING GLOBAL CLIMATE CHANGE TO THE PUBLIC AND CLIENTS

"Climate is what you expect, weather is what you get." This often-used quote takes on a new meaning these days because what to "expect" in the future has become a spirited, often polarized, and increasingly nonscientific "debate." Increasing numbers of broadcast meteorologists, to whom the public looks for information and guidance on climate change and global warming, are not offering scientific information but rather, all too often, nonscientific personal opinions in the media, including personal blogs. Alarmingly, many weathercasters and certified broadcast meteorologists dismiss, in most cases without any solid scientific arguments, the conclusions of the National Research Council (NRC), Intergovernmental Panel on Climate Change (IPCC), and other peer-reviewed research. For example, a recent public claim is, "I do not know of a single TV meteorologist who buys into the man-made global-warming hype."[1]

Such posturing aside, sampling the many climate-change Web sites[2] may leave many of us who want to be objective communicators of weather and climate information confused to say the least. How do we maintain our professional integrity while also exercising our rights to freely express our opinion on an issue that a recent Harris poll indicated is of great concern to the public in many countries? How do we best apply our own specialized education, knowledge, and communication skills to help the public understand the complex issues of climate change? We strongly believe that, above all, if we are to professionally, fairly, and objectively communicate scientific information (as opposed to a personal or political opinion), we should use our scientific training to stay as informed as possible and make sure to read beyond the headlines.

Few of us possess extensive training or research experience in global climate modeling or paleoclimatology, solar physics, glaciology, oceanography, or the numerous other rigorous disciplines related to climate change. However, many AMS Sealholders, CBMs, and most CCMs have a bachelor's degree in meteorology or a related science and should be comfortable reading climate change-related papers or abstracts in *BAMS*, *Journal of Climate*, *Journal of Geophysical Research*, and other peer-reviewed sources such as summaries of recent IPCC and NRC reports.

The expertise of scientists actively researching climate change is well beyond that of most professional meteorologists, some of whom may only have basic training in weather analysis and forecasting. Nonetheless, the public sees media meteorologists as experts. If we "experts" communicate conflicting information, conveying personal opinions with no scientific basis, the public can become confused and often collectively "tune out" of the issue just when it requires the most attention. The same would happen if we gave conflicting personal opinions during dangerous weather events. When we stray from objectivity in communicating the latest scientific findings, we do the public a disservice.

As outlined in the CBM and CCM programs, a responsible broadcast and/or consulting meteorologist should continue to stay as informed as possible and look to the AMS for leadership. The "AMS Statement on Climate Change" recently adopted by the AMS Council should be required reading for all of us who communicate with the public or seek guidance on climate change. While some of us may disagree with its exact wording, the weight of the scientific evidence behind the Statement is very solid. If we consider ourselves practicing scientists or science communicators, those of us with little or no training in the science of global circulations, air-sea interactions, radiative physics, and/or global modeling would be hard pressed to disagree with the basic consensus view of so many outstanding researchers who contributed to documents such as the AMS Statement or other recent reports issued by prestigious national and international scientific panels and peer-reviewed scientific papers in journals such as the *Journal of Climate*. The consensus view certainly is not final or definitive: our science is dynamic, but it is the best science we have right now.

In its "Final Remarks," the AMS Statement reads: "Despite the uncertainties noted above, there is adequate evidence from observations and interpretations of climate simulations to conclude that the atmosphere, ocean, and land surface are warming that humans have significantly contributed to this change and that further climate change will continue to have important impacts on human societies, on economies, on ecosystems, and on wildlife through the twenty-first century and beyond."

If those who represent and communicate our shared sciences to the public feel a need to express personal opinions about global change and global warming, then they also have a professional obligation to at least share the above conclusions, which reflect the best thinking of our expert colleagues actively working to better understand and predict what may be the greatest challenge our science has ever faced.

—*Bob Ryan* (AMS Past President; CBM; CCM; NBC-4, Washington, D.C.) and *John Toohey-Morales* (AMS Commissioner on Professional Affairs; CBM; CCM; NBC Telemundo, Miami, Florida)

[1] James Spann quote from http://climatebrains.com/?p=5

[2] http://www.ipcc.ch; http://climatesci.colorado.edu; http://www.realclimate.org; http://www.climatescience.gov; http://icecap.us; http://www.climatepolicy.org; http://www.pewclimate.org

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