Climate Change Education Goals and Objectives Workshop

What Should Our Leadership Focus on When It Comes to Educating the Public About Climate Change Using Mainstream Media?

Heidi Cullen
Climate Central

Princeton Professor Robert Socolow sums up climate change as follows, "Never has the work of so few, led to so much, being asked of so many." In a sense, this also sums up the basic education challenge facing our community. Research by a relatively small group of people (the climate science community) strongly suggests that the choice to burn fossil fuels to power our modern economy is extremely harmful to our climate over the long-term. As a result of this "work", the climate science community is now asking the public to reconsider our primary energy sources (coal, oil, and natural gas) and focus on retooling our energy infrastructure to focus on long-term sustainability. When stated this way, it is clear that climate change is as much a cultural and values issue, as it is a science and technology issue. We are indeed asking a lot of the American public. As a result, our challenge is to build a strong and clear case for action.

Storytelling

I am an engineer and climate scientist by training, but I have spent the last several years as what I would consider a climate science educator – producing reports for outlets like The Weather Channel and PBS NewsHour.

Starting in 2005, I began a crash course in the media when I signed up to be the on-air climate expert at The Weather Channel. With little experience communicating science to the general public, I began writing and reporting weekly 90-second reports called *Forecast Earth Headlines*. These video "packages" (as they are known in television) featured newly published climate science research (simplified for a general audience), breaking climate news (impacts, solutions, policy) as well as general-interest science reporting. Eventually, *Forecast Earth* grew into an hour-long news magazine that also included green lifestyle and clean technology programming.

Ultimately, my crash course in the media was really a crash course in storytelling - it is the only way to cultivate and grow an audience that is both engaged and passionate. For this reason, I think any approach to building effective educational content should be centered on the principles of good storytelling.

Based on my experience, there are three components to creating successful content. They are:

1) Knowing your audience and what it cares about.
2) Building a strong, personal narrative that speaks to your audience.
3) Providing clear, actionable takeaways.

At a more granular level, I would like to mention the findings of focus group testing done for Forecast Earth. This testing was by no means comprehensive, but it serves as useful background for strategy discussions. Focus group testing suggested that our show's audience (and there are lots of different audiences out there) was interested in the following:

1) Understanding how climate change impacts local communities - now and in the future.
2) What real people are doing at the local level to help solve the problem.
3) What people can do personally (green lifestyle choices) in their daily life.
4) The latest in new technology (renewable energy, energy efficiency).

We also tested to see what people were not interested in. Again, our specific audience told us it was not interested in:

1) What celebrities were doing to solve the problem.
2) What politicians were doing to solve the problem.

Two of our most popular segments were called *Grassroots Green* and *Smart Science*. These were 2 to 4 minute reports that were character driven and locally based.

Grassroots Green focused on what regular people were doing in their community to reduce their carbon footprint. You can watch a segment here: http://www.youtube.com/watch?v=GWvQYJNRsxI.

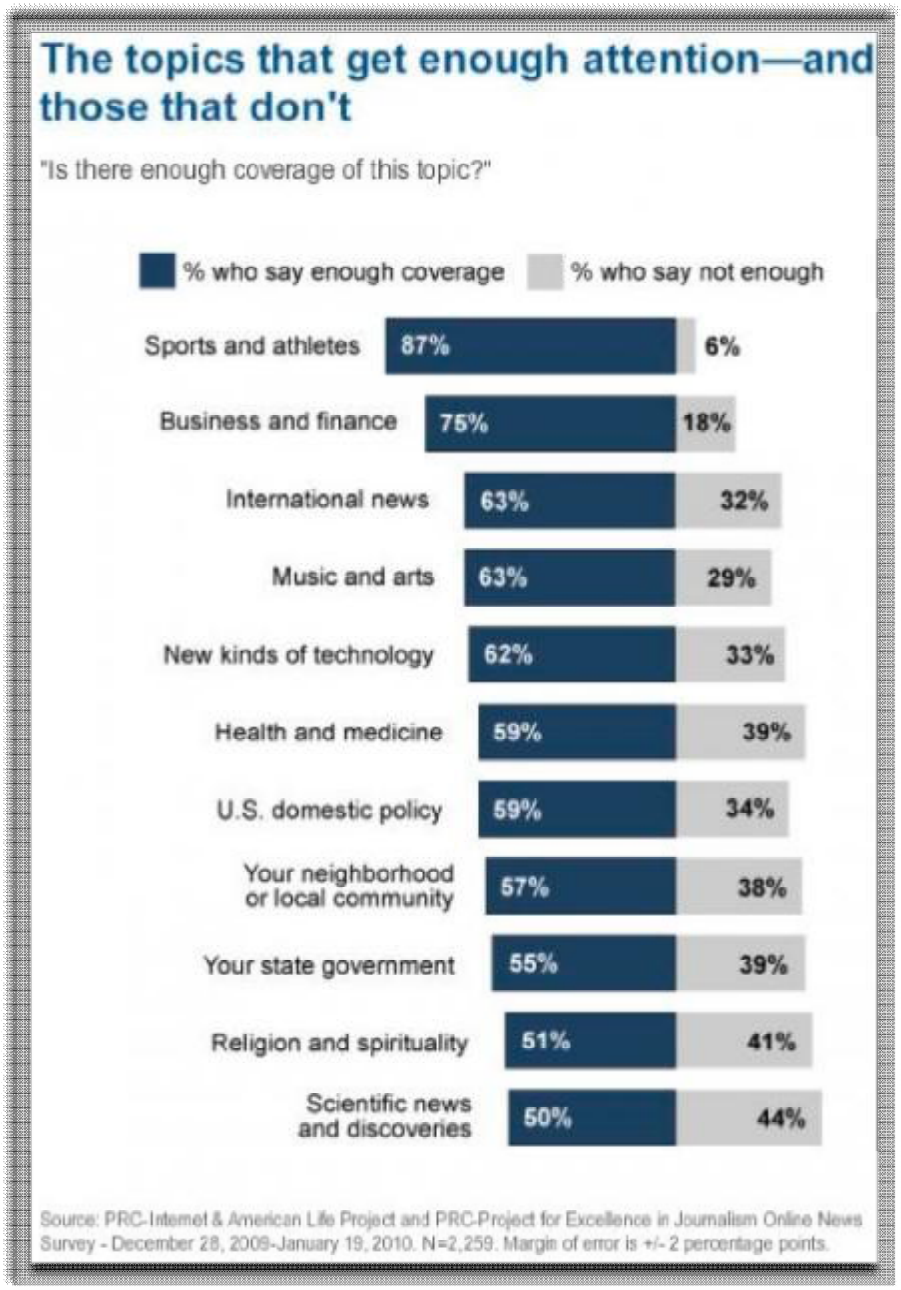
Smart Science explained the science behind green technologies in simple terms. This segment explained the science of green dry cleaning: http://www.youtube.com/watch?v=zJLGepoOeTo

The Changing Media Landscape

The media landscape is undergoing a radical transformation, but the principles of good storytelling will never change. In today's fast-paced world, very few people are willing to devote an hour to learning about the climate; so building short, bite-sized nuggets of information are becoming more and more important when working with the mainstream media. Also, as audiences continue to shrink and fragment based on interest, political preference and technology options (mobile devices, computers, television, podcasts), our challenge is to identify ways to reach audiences across all

platforms. We especially need to capitalize on news-related moments (i.e., extreme weather) when we can reach the largest possible audience.

A recent Pew poll (Pew Research Center; March 1, 2010) suggests that despite declining coverage and large-scale layoffs in the science journalism community, there is an appetite for science news and information. In fact, of those surveyed, 44% said that there is not enough coverage of science and technology (larger than any other topic). The poll also suggests an interest in more coverage of local community topics.



What is the goal (i.e. increase understanding of climate change, increase understanding of how to mitigate or adapt to climate change, influence decision making processes, environmentally friendly decisions, etc.) of climate change education from a media perspective?

Understanding, Concern and Urgency

The recent report from the Yale Project on Climate Change Communication titled *Americans' Knowledge of Climate Change* found that 63 percent of Americans believe that global warming is happening, but many do not understand why. On a related note, the polling work of Prof. Jon Krosnick at Stanford University indicates that the primary factor driving a person's overall level of concern about global warming is the belief that global warming is caused by human activity.

For these reasons, a primary goal for our community should be to help the general public understand the connection between fossil fuel burning, heat-trapping carbon dioxide pollution and climate change impacts. By building understanding – helping the public connect the dots - we raise concern. By raising concern, we help people understand that this is an urgent issue that must be given high priority.

Krosnick also found important secondary factors that drive concern. Addressing these issues should also be a goal within any communication effort. They are:

1) The public's trust in scientists.
2) The public's belief that scientists are in agreement (consensus).
3) The overall level of attention being paid to the issue (i.e., media coverage).

There must be a concerted effort within our community to increase coverage of the climate issue. The fact that the Yale report found that only 25% of American's had ever heard of coral bleaching or ocean acidification suggests we have our work cut out for us.

Finally, I think it is important to acknowledge that different educator communities will need to set different education goals. For the climate science community it is important to clearly (and passionately) explain the science, the impacts and the solutions in stories to which the audience can relate. That said, I think one over-arching goal is to create a so-called "network of networks" so that all our work is coordinated across agencies and platforms.

Are there different goals for audiences? Do different audiences pay attention to information from specific types of media?

As Ed Maibach has often said, the key to good communication is "simple, truthful messages, repeated often, by a variety of trusted sources". I think the basic goal is

understanding and raising the overall level of concern, but I do think it is important to tailor messages to different audiences. That means testing different language, identifying the preferred medium (print, TV, radio, web) as well as establishing who the trusted sources are for a given audience. While recent polls suggest scientists are still seen as trusted sources of climate information, there are other important messengers out there. For example, broadcast meteorologists, clergy, hunters/anglers, and military leaders are seen as "trusted source" within different communities and can be tapped to educate about the issue. But, I believe their messages need to be contextualized. For example, broadcast meteorologists can focus on the connection between climate change and extreme weather events, the clergy can help ground climate change as a values issue, and military leaders can talk about the national security threats associated with climate change.

What strategies have been most successful for reaching the goals climate change education through various types of media? Are the strategies different for different audiences?

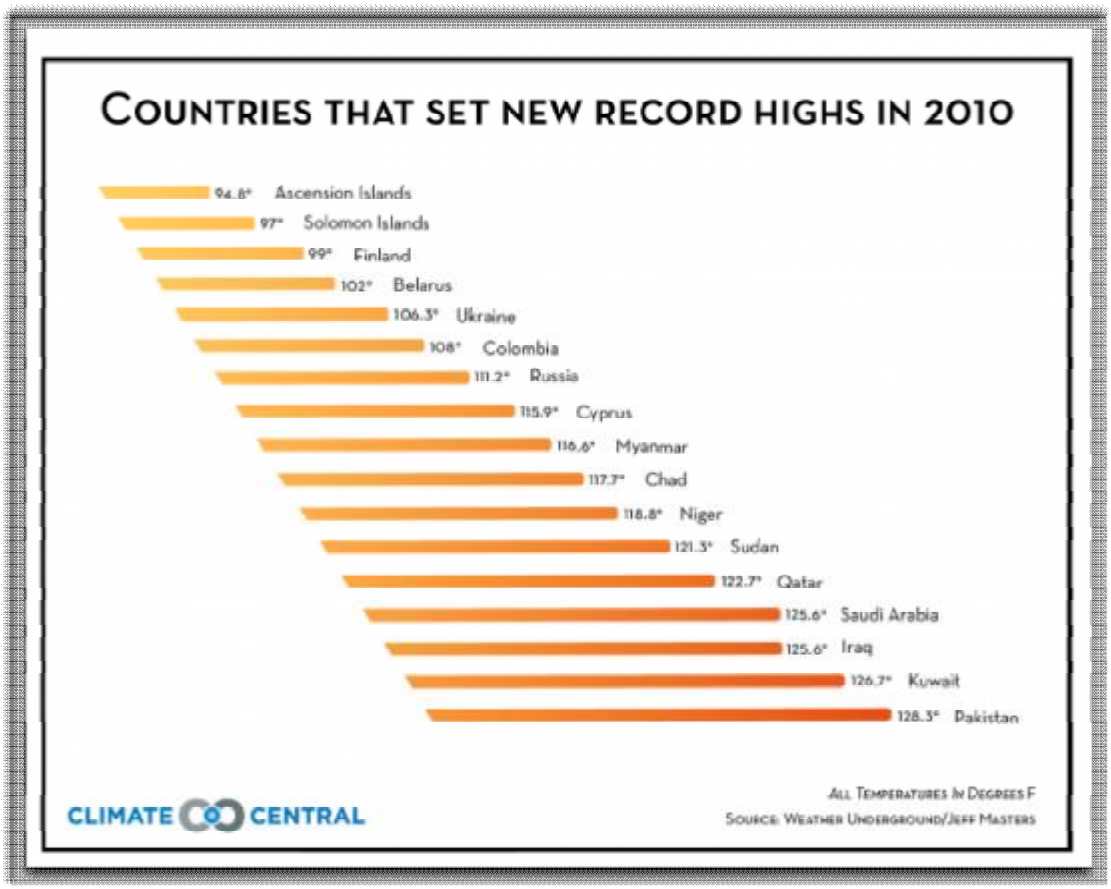
While the overarching goals should transcend audience, strategies will always be somewhat different for different audiences and across different platforms. Climate Central has been working across print, TV news and web platforms and has identified some communications tools and strategies that seem to stick.

Entering the News Cycle

The unifying factor across all platforms is to capitalize on events that make it into the news cycle and therefore grab the attention of the general public at large. For example, by seizing upon extreme weather events that penetrate through the noise of the 24/7 news cycle, there is a tremendous opportunity to reach large portions of the public at key moments. An excellent example took place this summer during the Russian heat wave and the Pakistan floods. Having a clear message is critical and having the infrastructure in place to capitalize on media interest is key. Media interest in climate is fleeting and windows of opportunity must be treated with respect.

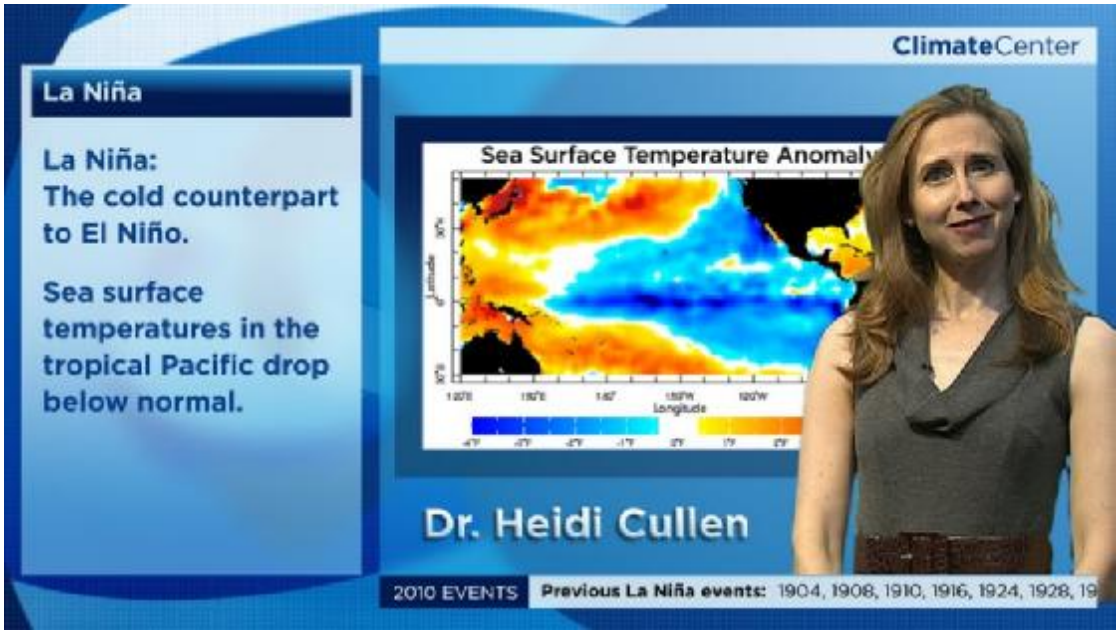
Infographics

At Climate Central we have seen that infographics that seize upon breaking news and provide a "climate context" are very popular with our audience and are consistently among the most popular items on our website. They are also among those items that get cross-posted most frequently at other sites. An example of one of our infographics is listed below. Compelling and clever infographics can be used by print and TV journalists as well as bloggers and broadcast meteorologists to provide depth and perspective.



Video: ClimateCenter

Aimed at a more professional audience (meteorologists, water resource managers, coastal planners, etc.) while also trying to cultivate an audience from the general public that is "climate curious" we have developed a 2-minute video segment called *Climate*Center that specifically aims to establish the "routine relevance" of climate science, climate forecasts and adaptation strategies. We produce this segment with NOAA climate products and aim to provide the large-scale context (both natural climate variability and climate change) to extreme weather events (something polling has shown directly affects the public's concern about global warming) and also showcases how climate data and climate forecasts are being used to protect communities and keep people out of harm's way. You can watch the most recent edition of *Climate*Center here: http://www.climatecentral.org/videos/web_features/climatecenter_what_la_nina_means_for_winter_weather/



Video: States of Change

This is an ongoing series that features compelling human narratives and local impacts and adaptation/mitigation strategies. Prompted by the findings of the *Season's End: Global Warming's Threat to Hunting and Fishing* report, our story looked at linkages between Montana's trout population and the long-term impacts of global warming. We featured renowned fly fisherman Craig Mathews to narrate the story of Montana's trout population.

You can view the segment here.

Additional References:

1. Center for Research on Environmental Decisions. (2009). *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. New York. For an online version of this guide, visit cred.columbia.edu/guide.

2. Leiserowitz, A., Smith, N. & Marlon, J.R. (2010) *Americans' Knowledge of Climate Change*. Yale University. New Haven, CT: Yale Project on Climate Change Communication. http://environment.yale.edu/climate/files/ClimateChangeKnowledge2010.pdf

3. A. Goodman, (2008) *Storytelling as Best Practice* 4th Edition.

4. A. Kohut, S. Keeter, C. Doherty, M. Dimock, M. Remez,*Economy, Jobs Trump All Other Policy Priorities In 2009* (The Pew Research Center for the People & the Press, 2009).

5. A. Leiserowitz, E. Maibach, C. Roser-Renouf, (2009) *Climate Change in the American Mind*.

6. Pew Research Center,*Understanding the Participatory News Consumer*, March 1, 2010. http://www.journalism.org/node/19537

7. Bipartisan Policy Center,*Seasons' End: Global Warming's Impacts on Hunting and Fishing*, 2008. http://www.seasonsend.org/downloads/SeasonsEnd.pdf