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Unanswered Questions from U.S. EPA State and Local Climate & Energy Webcast: Gaining Support and Attracting Participation through Communication

December 4, 2013

Questions in bold were asked during the webcast.

Questions for All Speakers

1. *Do the speakers have any resources related to behavior change design that they can share?*

Samantha Kappalman: All of the behavior information we have is up on the Climate Communication Consortium website: <http://www.climatemaryland.org/>

2. *How can grassroots marketing be used as an effective form of communication?*

Samantha Kappalman: Most people get their news online or on TV. Most people, however, are passionate about issues that others in their community are passionate about. That is why training climate champions to speak with community groups is so important.

3. *Our utility provider is pushing natural gas expansion. Will there be methods or plans to counter the surface appearance of short term solution vs. long term need?*

Samantha Kappalman: In Maryland, we are not addressing this issue at this time.

Questions for Susanne Moser (Susanne Moser Research & Consulting, Stanford University)

1. *How do you measure whether the short-term goals are successful (learning, change in awareness, knowledge, skills, opinions, vision, motivations, aspiration)? These don't have quantitative metrics to measure?*

This is a complex question and difficult to answer in abstract. Ideally, however, measuring the achievement of these (and really, any other longer-term) goals depends on showing that your intervention made an observable difference, and so you need to know what the state of these things are *before* you start to engage, and then measure again *after* your engagement.

With regard to the specific items listed, I offer a quick little table below with variables you could measure for each through a simple survey, or before and after you have a community workshop, or something similar.

I don't know how you can convincingly show success without measuring. Unfortunately, many people just say, because 50 people showed up at a meeting, the intervention was successful. That

is wishful thinking at best. Measuring what YOU do, is not measuring the EFFECTS of your doings. So, you can definitely do better by actually asking people or gathering observations that show how your intervention changed behavior.

Outcome	Variable to measure
<i>Learning, change in awareness and knowledge</i> (hard to separate these)	Self-reported knowledge/change in knowledge <ul style="list-style-type: none"> • Have you heard of ...? [measures awareness of things] [before/after] • How well informed do you feel about? [measures knowledge] [before/after question] • How much do you feel you have learned from [intervention]? [rating scale 1-5, including can't judge] • What would you like to know more about? [open-ended]
<i>Skills</i>	[This requires that you specify which specific skills you want people to learn] <p>Familiarity</p> <ul style="list-style-type: none"> • How familiar are you with [skill]? <p>Comfort</p> <ul style="list-style-type: none"> • How comfortable are you using [skill]? • How likely are you to use this [skill] in your work/at home? <p>Self-reported/Actual use</p> <ul style="list-style-type: none"> • How frequently do you use the following skills: [list skills and have frequency rating options from never to all the time] [can do before/after] • If the skill relates to an observable behavior (e.g., purchasing, recycling, installing insulation), assess what behavior is before and after your intervention but be mindful that skill is not the only determinant of behavior. Other barriers may prevent adoption.
<i>Opinions</i>	Thinking <ul style="list-style-type: none"> • What do you think about...? [before/after] • How do you judge ... [e.g. climate risks, community's response capacity] • In your opinion, who should be responsible for [doing x, y, z]? [with options] [before/after]
<i>Vision</i>	[Vision is best assessed in an open ended fashion, rather than asking people to rate true/false or likely/unlikely statements, but of course that is possible too. If you compare before/after, you will see whether any information about climate change or threats to the environment or solutions to these problems have entered them.] <p>Imagination</p> <ul style="list-style-type: none"> • What do you think this community [organization, region, etc.] will look like in 50 years from now? [open ended] • What do you imagine life to be like here in 50 years from now? [open ended] <p>Hopes & Fears</p> <ul style="list-style-type: none"> • What do you most want for your children? [open ended] • What do you most want for your community? [open ended] • What are you most worried about for your children? [open ended] • What are you most worried about for your community? [open ended] • What do you most want for yourself in the future? [open ended] • What concerns you most about the future, the environment, climate change, the world, the economy... [open ended]

<p><i>Motivations</i></p>	<p>[What motivates us is very intimately linked to our values, which can be traced through our thinking and feelings.]</p> <p>Thinking</p> <ul style="list-style-type: none"> • We should [take a particular action] regardless of what others do. [rate level of agreement on a 1-5 scale, including don't know option] • Tell us how likely you are to [take x action] at home [or in your place of work, or...] [rate likelihood on a 1-5 scale, including don't know option] <p>Feeling</p> <ul style="list-style-type: none"> • When you think about [climate change, our environment, the future], what feelings come up for you? [offer a wide range of options, including a write-in option] • What motivates you most to take action on [climate change, the environment]? [offer a range of emotionally-laden options {such as my children or grandchildren, my love for nature, those pictures of the polar bears, those poor people who will suffer the most), including a write-in option]
<p><i>Aspiration</i></p>	<p>[What we aspire to, personally and professionally, is also very intimately linked to our values, which can be traced through our thinking and particularly through feelings.]</p> <p>Thinking</p> <ul style="list-style-type: none"> • I think our community should to be among the leaders on climate change and take action now. [rate level of agreement with statement on a 1-5 scale] [before/after] • I think our community should wait and see what happens with climate change before we take any action. [rate level of agreement with statement on a 1-5 scale] [before/after] • I think our community can be an environmental leader and prosper economically. [rate level of agreement with statement on a 1-5 scale] [before/after] • I think being a responsible parent means reducing our footprint on the planet now, so that our children inherit a safe and livable planet. [rate level of agreement with statement on a 1-5 scale] [before/after] <p>Feeling</p> <ul style="list-style-type: none"> • I want to take a greater leadership role on [type of action] in my [home, place of work, community]. [rate level of agreement with statement on a 1-5 scale] [before/after] • If I don't take [specify action] now, I feel like I'm failing my children. [rate level of agreement with statement on a 1-5 scale] [before/after] • I am worried what others think of me if I do/don't take [specify action]. [rate level of agreement with statement on a 1-5 scale] [before/after]

You get the idea.... I hope this helps.

2. *What is agenda 21?*

Agenda 21 is a non-binding, voluntarily implemented sustainable development action plan of the United Nations. It is an outcome of the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992. The "21" in Agenda 21 refers to the 21st Century. It is an action plan for the UN, other multilateral organizations, and individual governments that can be executed at local, national, and global levels. It has been affirmed and modified at subsequent UN conferences.

Agenda 21 has come under political attack in the United States by some interest groups, affecting local sustainability and climate change planning.

Learn about UN Agenda 21:

<http://sustainabledevelopment.un.org/index.php?page=view&nr=23&type=400>

Questions for Connie Roser-Renouf (George Mason University)

1. *I'm interested to hear your thoughts on using positive messaging to achieve behavioral change—e.g. using visuals of a low-carbon future vs. talking about the doom and gloom of climate change. Is there research into the effects of positive vs. negative messaging?*

Surveys show that risk perceptions have increased over the past five years in the United States – although still not necessarily achieving a level that accurately reflects the magnitude of the risk -- while beliefs that individual action can make a difference have declined (Leiserowitz et al. 2012). Collective efficacy is also low: In one of our recent surveys, a fifth (22%) of our respondents believed that society could reduce global warming, but won't because people are unwilling to change their behavior. Half said it's unclear what society will do, while only six percent said society can and will. Communicators face a public in which some are frightened and despairing, while others do not recognize there is cause for concern: Addressing the latter with messages about climate impacts runs the risk of increasing despair in the former, unless messages are accompanied by credible, achievable solutions.

With survey data we cannot assess whether people with high risk and low efficacy perceptions are responding to the issue by defensive avoidance, but our results do suggest that high risk perceptions alone are not enough to motivate action: Respondents with high risk perceptions, but who do not believe that humans are causing climate change or could solve it, were no more likely to have engaged in political activism in support of climate change mitigation than people who were not certain global warming is happening (Roser-Renouf et al., 2010). Only 3 percent of this group had engaged in some type of activism, compared to 40 percent of the group that were certain human-caused global warming is happening, harmful, and solvable.

A clear implication is that climate communicators should work to build a sense of efficacy among their audiences. One possible strategy is to present efficacy-building information first, followed by information on the threat. The Science Museum of Minnesota's climate change exhibit, for example, begins with efficacy-building and then turns to climate impacts. Their surveys show that climate change beliefs among museum visitors mirror national benchmarks,

but a 2011 evaluation of the exhibit found that 60 percent of the visitors felt hopeful after seeing the presentation (Phipps and King 2011), as compared to 47 percent of Americans nationally (Leiserowitz et al. 2010). This was not a formal test of efficacy-building, but it suggests that a larger-scale assessment of this idea would be useful.

Leiserowitz A, Maibach E, Roser-Renouf C et al. (2012). Climate change in the American mind. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. Accessed 7 July 2013

<http://environment.yale.edu/climate-communication/files/Climate-Beliefs-September-2012.pdf>

Leiserowitz A, Maibach E, Roser-Renouf C et al. (2010). Global warming's Six Americas. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. Accessed 7 July 2013.

<http://environment.yale.edu/climate/files/SixAmericasJune2010.pdf>

Phipps M, King Z (2011) Planet earth decision theater live performance: Formative evaluation. Available at:

http://archive.informalscience.org/reports/0000/0582/PEDT_Theater_formativeFINAL.pdf

Roser-Renouf, C., Maibach, E., Leiserowitz, A., & Zhao, X. (2010). The Genesis of Climate Change Activism: From Key Beliefs to Political Advocacy. Paper presented to the Behavior, Energy and Climate Change Conference, Sacramento.

2. *Given how loud and influential so many of the doubtful and dismissive are (and how much money many of them have), don't you think they should be considered an essential audience to target, especially since they continue to sway those in the middle of the spectrum?*

It's a very tricky issue, but no, I don't think you should keep trying to target them. You're not going to change the minds of the Dismissive—they may actually end up becoming even more convinced of their incorrect views because of motivated reasoning and counter-arguing, which can result in boomerang effects (Hart & Nisbet, 2011). And by engaging with them, you may actually be helping to promote the incorrect information they keep pushing: There's an interesting and surprising literature showing that repeating incorrect information—even when your intent is to refute it—ends up reinforcing the incorrect beliefs. This is because ideas that are more familiar are more likely to be deemed true (Schwarz et al., 2007). Over time, the low involvement middle segments forget the refutation you've presented, but repeating the incorrect information has been another reinforcement of it. Hence, for the middle, unconvinced groups, the best approach is to simply ignore the Dismissives, and keep repeating the information that's correct—each repetition will be another strengthening of the idea in memory.

Hart, P.S & Nisbet, E. (2011). Boomerang effects in science communication: How motivated reasoning and identity cues amplify opinion polarization about climate mitigation policies.

Communication Research, 39(6): 701-723. doi: 10.1177/0093650211416646

Schwarz, N., Sanna, L., Skurnik, I. & Yoon, C. (2007). Metacognitive experiences and the intricacies of setting people straight: *Implications* for debiasing and public information campaigns. *Advances in Experimental Social Psychology*, 39. doi: 10.1016/S0065-2601(06)39003-X

3. *How do you drive the Alarmed and Concerned Citizens (about 70% of our community) to take action—and deeper action than changing light bulbs? For example, we need everybody to insulate their attic and drive 40 miles less per week per household in order to make our goals.*

Well, when I can answer this question, I think I'll deserve a Nobel. Have you identified the existing barriers that may be inhibiting people from taking action? Do you know whether you're reaching them with your message? I think you need to understand why they're not doing these things—can't afford the insulation? Think it's too hard? Don't have access to public transportation or live in walkable/bikable communities? Sense that it won't make any difference if they take action? Believe that no one else is doing it, so why should they make the effort? I would try to find out what the barriers are through focus groups, and then set about addressing them—by making changes to the environment (to the extent that's possible) such that it makes the actions easier—and/or by changing your messaging to address conceptual barriers, such as the belief that it won't make any difference, it's too hard to do, etc. And I would make sure that you're using the media channels your target group uses, so you can be sure you're actually reaching them.

4. *Can you talk about how you came up with the six groupings (alarmed, concerned, cautious, etc.)? Did you use census data, surveys, Claritas tapestry data, etc.? Could the method be replicated for other environmental causes?*

The methods are described in detail here:

Maibach, E., Leiserowitz, A., Roser-Renouf, C., & Mertz, C. K. (2011). Identifying Like-Minded Audiences for Climate Change Public Engagement Campaigns: An Audience Segmentation Analysis and Tool Development. *PLoS ONE*, 6 (3): e17571. doi:10.1371/journal.pone.0017571
(The journal is open-access, so it's free for anyone to use – you don't need a subscription.)

And yes, these methods could be used for other environmental causes. The challenge is obtaining nationally representative survey data, and then hiring a statistician who can do the analysis.

5. *How do you spell the name of that village in Alaska?*

Shishmaref.

Questions for Samantha Kappalman (Maryland Department of Environment)

1. *You talked about having scientists be the trusted sources and speakers at community group meetings. Can you comment on if you are training them for communication? In other words, sometimes scientists speak in data and such rather than compelling and engaging messaging around narratives, success stories, generating inspiration, and motivation for behavior change.*

Yes. In fact, thank you for asking that question because we will be conducting message training for all of our trusted sources who will be going out into the community and they'll all be using tailored PowerPoint presentations in these meetings (they'll all be developed by us, so that we can keep everybody on message). Thank you for pointing that out. But we also want to make sure that not only are we illustrating with images and stories but that we're also keeping and repeating the simple messages. That is really, really important because sometimes when you put a scientist up there, you end up only understanding every other word (which was "and" and "the"). So we will be training everybody before we send our climate champions out into the community.

2. *I like the idea of having trusted community members talk to local groups. Do you have strategies for identifying these individuals in communities?*

As a consortium, we are identifying local scientists and influencers who would also be effective communicators. The members of the consortium come from non-profits, state and local governments, and advocacy groups. It is important to have that wide lens for viewing each potential speaker.

3. *How can I get a more specific poll in my state re: % alarmed, etc.?*

<http://www.climatemaryland.org/>

4. *In Maryland, do you have specific behaviors that you have identified and tracked in terms of changes made as a result of your engagement?*

Our education and outreach campaign has not yet started. We hope to have those metrics at the end of our campaign.

5. *You showed a chart of percent annual reduction of CO₂e by sector, identifying which sectors can have the largest reduction. Did you identify current energy consumption by sector or did you identify which sectors have the greatest POTENTIAL to be reduced (such as identification of lowest barriers to action or such)?*

We identified which sector can have the largest reduction.

6. *Can you talk more about how they used the video of the governor and YouTube ads to direct people to the website and collect email addresses, please?*

We did a very short video of the governor and then added images that would resonate with people in post-production. We then used that video as part of a You Tube ad campaign targeted at Marylanders to send them to the climate change website: climatechange.maryland.gov—at the website we have a place where someone can sign up to get news from us on climate change.

7. *I work at NIH which is the largest employer in Montgomery County, MD. Is Maryland doing anything to engage large employers to participate in Maryland's initiatives?*

The Maryland Energy Administration just started a campaign to get large employers to participate in Maryland's initiatives. You can see more here:

<http://energy.maryland.gov/Business/empowermdchallenge/index.html>

We will also target large employers in our education and outreach campaign, which we hope to kick off in the spring.

Questions for Robert Graff (Delaware Valley Regional Planning Commission)

1. *You said we should cater to what the municipality needs and wants. I'm wondering if you can comment on whether we can find common ground, vision, and goals with partners (so that our county goals are met in conjunction with the municipality's goals)? I'm thinking about this for all partner types (cities, nonprofits, business orgs, etc.).*

Great question. It's a little bit difficult to answer without a full understanding of the context in which you're asking it. That said, however, here are a few thoughts:

- Sometimes it may not be necessary to find philosophical common ground, and focus instead on implementing the change you wish to happen, regardless of what is motivating. For instance, while we are interested in reducing greenhouse gas emissions as a key goal of our work, our municipalities are—by and large—motivated by saving money or by improving building performance (greater comfort, improved lighting, more reliable systems).
- While we have found no real opposition to greenhouse gas reduction among the municipal officials we've been working with, for many people and organizations greenhouse gas reduction is not as strong a motivator as some of the other benefits associated with reducing energy use in municipal operations. For instance, when we talk about LED streetlights or traffic signals, we talk about issues such as reduction in labor for replacement, improved light quality (for the streetlights), ability to run traffic signals off of batteries during power outages, etc.
- In general, we try to focus on how to motivate people to take the action you want them to take. If that motivation is different than our organizational motivation, that's fine.

2. *Aside from climate change planning, have you developed energy management action plans with defined targets and detailed initiatives on how to achieve the targets? If so, would you make them available to the audience?*

Please visit www.dvrpc.org/EnergyClimate for an overview of the various initiatives DVRPC has in this area.