U.S. EPA Webcast:

Climate Change Adaptation for State and Local Governments, Part 1
Achieving Buy-In for Adaptation

March 21, 2013

Questions in bold were asked during the webcast.

General Questions

1. *Do you have any recommendations on what to say to vocal climate deniers that show up at stakeholder planning meetings?*

   JT Lockman: When discussing climate change adaptation at the local or site level, I have told climate deniers that they should bring up their concerns and contact the IPCC or the United Nations. I have even provided them with addresses to do so. I explain that we are not discussing the causes of climate change, but rather what to do about it. I explain that national and international bodies are investigating the causes of climate change and not us.

   During the webcast I used the example of dealing with repeated theft. This sort of example has worked on climate deniers. For instance, if you were a store owner and were suffering from repeated shoplifting losses, you would install cameras, and perhaps hire some security. It would be pretty silly to take the position that you would do nothing about shoplifting until its causes were proven to you, beyond any doubt. It is a worthy and interesting problem to figure out why people shoplift. (Drug addiction, mental illness, poverty?) However, most store owners are actively trying to prevent being shoplifted, without participating in discussions about its ultimate causes. They leave that process of ferreting out the causes of crime to the social work, mental health, and criminology communities of specialists. Maybe someday the causes of shoplifting can be mitigated, but meanwhile, expect store owners to keep upgrading their cameras in the years ahead.

   Cara Pike: Please take a look at the following links:
   - http://www.climateaccess.org/resource/tip-sheet-best-practices-talking-climate-skeptics
   - http://www.climateaccess.org/resource/tip-sheet-7-ways-overcome-opposition
   - http://www.climateaccess.org/resource/tip-sheet-george-marshall-how-talk-climate-change-dissenter

2. *How important is "public health" as a frame or motivation for climate adaptation?*

   Cara Pike: Polling is starting to show the public sees the need to invest in public health as a response to climate impacts.

Some work has been done on how to frame the connection between public health and climate. See: http://www.climateaccess.org/resource/tip-sheet-communication-tips-public-health-professionals.

Questions for Emma Zinsmeister (EPA)

1. *Is there somewhere to find an updated list of potential financial resources?*

   We will be covering funding approaches for climate change adaptation during the third webcast in this series, Attracting Funding for Adaptation, on May 1, 2013, 1:00-2:30 PM (EST). You can register for the webcast at: https://www2.gotomeeting.com/register/869045530. During this webcast, we will provide links to many funding sources that can be used to support state and local adaptation efforts.

2. *You mentioned "state and local governments," is it not "state, local and tribal governments"?*

   Yes. Tribes are also impacted by climate change and have an important role to play in adaptation. Although this webcast series is not specifically designed to cover adaptation issues unique to tribes, the resources and concepts covered should be useful for tribes. For a discussion of climate change mitigation and adaptation issues specific to tribes, please see the files from our December 11, 2012 webcast, Tribal Approaches to Address the Changing Climate.

Questions for Cara Pike (The Social Capital Project)

1. *In talking with people that show a lot of pushback and believe global warming is a farce, should one just move on to those that understand and are open?*

   It depends on the goals for your engagement program. If you are trying to build short term support for climate policies or build engagement in energy behavior programs, it is wise to focus on those who are most open and ready to be part of the conversation. At the same time, you can assume that there will be some vocal push back so you have to be prepared to deal with. I would aim for 70% of an outreach effort being focused on those most reachable, while 30% or less being allocated for dealing with those opposed. Adopting peer to peer communication approaches can work to help diffuse push back. For example, leaders in Oregon found skeptics were comfortable confronting them in public forums but when they switched to table discussions, these same people were respecting participants when in dialogue with other stakeholders from their regions who they saw more as their neighbors.

2. *If you chose the preparedness frame how do you distinguish it from emergency preparedness?*

   A climate preparation frame very much builds on emergency preparedness and what is known from risk communication (i.e. preparing for more extreme storm events). But this is just the starting point to bridge to a range of climate concerns. When exploring local impacts and what can be done to address them, mitigation efforts can be introduced as some of the best options for preparing and adapting to impacts. Issues that require further exploration include how to leverage storm events to build support for more difficult decisions, such as relocation, changes in financial incentives based on impacts, etc.

3. *Could you spend a little more time discussing successful ways to align discussion of Climate Adaptation/Mitigation and Equity?*

   There are some good examples of frames being used by faith based organizations and human development groups. Faith groups talk about the importance of taking care of those most vulnerable and the least prepared to address climate impacts. They describe a moral duty to act as stewards and to tie this to work on justice. Human development groups talk about the burden of climate change on those already struggling and how issues related to poverty, food, water, etc. Groups such as the NAACP are also moving into climate work and they frame adaptation/mitigation issues as community and economic rights. For more on this, you can read our guide on climate framing and outreach efforts, available at: http://www.climateaccess.org/resource/climate-communication-and-engagement-efforts-landscape-approaches-and-strategies.

   [**NOTE:** To access the guide, you must first become a member of Climate Access. Climate Access membership is available for climate practitioners (i.e. those working - or volunteering - at nonprofits and government agencies where at least part of one's role is to communicate with and engage the public in addressing climate issues). Service providers to these communities and academics working on the issue of climate communications and behavior change are also encouraged to become members of Climate Access. Membership is free. Membership approval will be determined by the Climate Access team based on criteria related to the applicant's professional experience.]

4. *It's the INCREASE in frequency and intensity of these events that points to climate change, correct? Aren't most Americans responding to single events or seasons and saying "that's climate change" or even more concerning "what climate change"?*

   Research on how Americans are responding to extreme weather events is relatively new, however, there is evidence that a number of responses are at play. For those who accept climate change, extreme weather events become evidence that it is occurring. They are looking to understand how the individual storm events are part of a larger picture. For those actively opposed to action, these storms are used to emphasize uncertainty (if this is global warming, why are we having snow storms). Most are in the middle and are still trying to make the basic connections across the issues. As a result, it is important to emphasize messages such as the larger trends around frequency and intensity are what's worrying, and not assume your audience is automatically connecting weather to climate change. There is interesting research showing many Americans are noticing changes in the growing seasons which may be an easier access point than focusing exclusively on the extreme storms.

5. *Is it possible to obtain a copy of the literature review that was mentioned in your presentation?*

We will be releasing a preparation guide in early summer so you can join/visit www.climateaccess.org to track the release plus other relevant resources on the topic.

Questions for Cynthia Rosenzweig (NASA GISS / Columbia University)

Resources and websites related to Cynthia Rosenzweig's responses are presented at the end of this section of questions.

1. ***Was the City Health Department included in the taskforce in NYC? If not, what was the reason?***

   The answer is yes, actually, and it should be on there. They did. They came to every meeting, and we should add it onto that slide.

   And they have been very active in preparing in particular heat advisories and especially working on the heat stress that we have now with our current climate and it's projected to increase in the future.

   I think also that the health departments in the communities are also a very, very—often a very key, good— place to engage with and that's because, again, that's a direct link to the community, and people do care about their health.

2. *It seems that between Points 6 & 7 of the Adaptation Process, there should be a bullet for "Find billions of dollars." How do we fund such a dramatic public works investment?*

   Stakeholders have capital budgets that should be reviewed to determine which adaptation strategies can be undertaken within funding constraints and if additional resources will be needed. Linking adaptation strategies to planned projects or other non-adaptation efforts can produce significant cost savings. It may be cheaper to implement adaptation strategies during rehabilitation cycles rather than add them on later (for example, when building a flood wall for a wastewater treatment plant along the coast to add an allowance for projected sea level rise). Opportunities for efficient scheduling of adaptations may also be provided by planned maintenance, operations or policy changes (Major and O'Grady, 2010).

3. *To what extent are the insurance companies affecting adaptation/mitigation efforts?*

   The insurance industry can play an important role in climate change mitigation and adaptation. Insurance companies facilitate the transfer of risk from individuals to the community at large so that those with greater risk pay higher premiums. Increased weather-related risks, such as being in a flood zone, will result in higher insurance rates and more limited coverage, providing disincentives for building or purchasing property in these high risk zones, as well as incentives for adaptation and risk-reducing measures. Examples of how insurance companies can contribute to climate change adaptation and mitigation efforts include specifying measures that customers

can take to reduce risks (such as retrofits, stricter building codes, and building in less risk-prone locations), using risk evaluation tools to help policymakers and adaptation planners better understand and assess the financial implications of climate change, conducting or encouraging research and statistical analysis on climate risks, and increasing awareness amongst customers by providing educational information on climate change related risks (LeBlanc and Linkin, 2010). For more information on the role of the insurance industry in climate change mitigation and adaptation, please see Chapter Six of the NPCC 2010 report.

4. *Could you expand on policy triggers in terms of abrupt change?*

   Extreme events such as Hurricane Sandy can provide opportunities for tipping points in policy responses. They raise public awareness of climate impacts and increasing future climate risks. They draw attention to the need for coordinated leadership in responding to climate change, with alignment across many levels of government. The events also are examples of climate science in place and time. (Rosenzweig, 2012)

5. *How can planned cuts in greenhouse gases occur without changing BAU?*

   Some business-as-usual trends are already reducing greenhouse gas emissions. For example, trends in energy efficiency are increasing, thereby slowing climate change forcing. According to the International Energy Agency (IEA, 2008), 16 of its member countries achieved energy efficiency improvements averaging 0.9% per year between 1990 and 2005. Several programs (e.g. Leadership in Energy and Environmental Design-LEED) offer business incentives (e.g., lower operating costs, tax rebates and increased asset value) for becoming more energy efficient (U.S. Green Building Council, 2013).

6. *On your second slide, can you explain the role of the expert panel?*

   The NPCC's had an advisory role in New York City's climate change adaptation process (Rosenzweig and Solecki, 2010). Specifically, the Panel was responsible for:

   - Preparing climate change projections for the NYC region and exploring how climate change has the potential to both positively and negatively impact the city's critical infrastructure
   - Developing planning tools to help guide stakeholders in their adaptation planning and strategy-creation process
   - Exploring how the regulatory environment influences infrastructure-related decision-making
   - Suggesting approaches to create an effective adaptation program for critical infrastructure, including ways to assess risks, prioritize strategies and explore how standards and regulations may need to be strengthened in a changing climate
   - Producing a summary report on climate change adaptation for NYC that outlines major themes and best practices to be included in a comprehensive adaptation program

Resources and Websites:

LeBlanc, A. and M. Linkin, 2010: Insurance Industry. Climate Change Adaptation in New York City: Building a Risk Management Response, C. Rosenzweig, and W. Solecki, Eds., Blackwell Publishing Inc, 113 - 126.

Major, D. C., and M. O'Grady, 2010: Adaptation Assessment Guidebook. Climate Change Adaptation in New York City: Building a Risk Management Response, C. Rosenzweig, and W. Solecki, Eds., Blackwell Publishing Inc, 229-292.

Rosenzweig, C., 2012. "Hurricane Sandy and Challenges to the New York Metropolitan Region." Hunter College. New York, New York. 3 December 2012. Presentation at the Hurricane Sandy and Beyond: Engineering, Ecology, and Policy Pathways in an Era of Climate Change Event.

Rosenzweig, C., and W. Solecki, 2010: Climate Change Adaptation in New York City: Building a Risk Management Response. New York City Panel on Climate Change 2010 Report. Vol. 1196, Blackwell Publishing Inc.

Energy Information Agency - http://www.eia.gov

U.S. Green Building Council – http://www.usgbc.org

New York City Panel on Climate Change available online at: http://www.nyas.org

Urban Climate Change Research Network – http://www.uccrn.org

ClimateYou – http://www.climateyou.org

Questions for Nancy Gilliam and Gwen Griffith (Climate Solutions University)

1. ***Do you have any recommendations on how to identify and activate local community champions?***

What we've learned is, and I think this is not a revelation, it really boils down to relationships; building relationships of trust across networks by sharing good information and providing a non-confrontational approach to adaptation planning and implementation.

So a lot is gained through personal interaction and really listening, hearing what are other people's priorities. For example, in Cookeville, it was listening and understanding the mayor and the administration and understanding their desire for really positioning the community as being attractive to development and growth as a sustainable community. Understanding that by listening helped provide a way for them to step up and be proactive in that way, which has served the community very well.

In addition, demonstrating public support for conservation and climate action can provide motivation for elected officials to be more proactive. For example, in the comprehensive

planning processes for both Cookeville and Sumner County in TN, public surveys showed very high levels of support for conservation, wildlife, and preserving the rural nature of the region. This significant public confirmation allowed officials and planners the backing they needed to move forward with climate adaptation goals.

2. *How did you find a community champion for the Idaho project?*

   I was new to the area and simply asked around. "Who, in the county or city government, is progressive, supports the protection of natural resources?" I also went to the mayor and asked him to tell me his concerns about natural resources. He opened up immediately about his water worries and agreed to sign Sandpoint on the Mayor's Climate Protection Agreement. To support HIM, we created a public event, out by the lake where he signed the agreement with reporters, cameras, etc. Finding out how to support the champion is vital.

3. *If there is established denial or resistance from the governor's administration through to the state legislature and appointed agency directors, is there a politically acceptable approach to giving adaptation legitimacy at the state level? To date, the only state-level climate impact report has been suppressed.*

   This was the case in another one of our states, too. When the local mayor came out with their "local" support of addressing climate change, it made state news. Being ahead of the curve makes good economic sense and a community can advertise itself to prospective new businesses as proactive, green, sustainably minded. Chattanooga TN drew large corporate interest for this reason. So bottom line, local planning can get the attention of state leaders.
   As above in question #2, we've also had success working behind the scenes with key agency folks who told us exactly how to "position" our strategy, in this kind of political climate.

   Strong economic arguments can also motivate resistors to recognize the wisdom in preparedness and risk management approaches. In one state doing climate planning, the governor's committee was only ready to do mitigation and felt adaptation was "down the road" a ways. But an economic analysis showing a 10 fold rise in one decade in state costs due to presidentially declared "natural" disasters turned them around and they approved strong adaptation goals in the state climate plan too. Your insurance companies can be an ally in those discussions if you build a relationship with them.

4. *Could you elaborate a bit more on bypassing resistance? What methods would you suggest in bypassing resistance/denial? Could you provide an example?*

   There are several good examples at this link: www.mfpp.org/EPA1.html. Go to Gwen's recorded presentation. Reframing climate adaptation in these ways can help:

   a) **Risk Management**: showing how expanded riparian zones can reduce flooding losses makes good sense to reduce costs to lives and property; etc.; the potential blow out of the

coal pond near the Dan River will destroy X homes and businesses downstream with the next flood;

b) **Economics**: show dollars lost due to invasive species in Lake Pend Oreille, Idaho; ski industry decline due to loss of snowpack; find local examples of how climate hurts local pocketbooks.
c) **Teach a "systems" approach**: hold educational sessions/print articles/get on the radio and talk about the relationship between forests, water, air, temperatures. People do not connect the systems unless educated.
d) **Religious Community**: find sympathetic churches, Creation Care, for instance, well respected local leaders in the faith based community.
e) **Natural Resources**: focus on resource stewardship and dealing with uncertainty and avoid using the term "climate" altogether early in the dialogue until a relationship has been built, then bring climate slowly into frame as they are gently educated on the topic

Questions for J.T. Lockman (Catalysis Adaptation Partners)

1. ***Will this analysis work in areas not expected to be impacted by sea level rise (e.g., Ohio)?***
Well, the model works by taking an asset and compromising it to a certain height.

So if you had an area with heavy rainfall incidents that had been flooding, you could use the model to look at potential damage from storms and if you had some data or predictions on the increasing frequency of 10-inch rains in the area, and then if you did some storm water improvements or drainage improvements, you could lessen that.

The model could be used to look at rainfall events. So I mean right now, the most obvious use of the model is in adapting to sea level rise and storm surge but it's been interesting that, you know, that particularly with Kingston, a community that was almost 80 miles north of New York City, that even there, they're getting hurricane damage enough to bring us in to work on this issue.

Cynthia Rosenzweig: Can I just add to that? I do think that it's really important that we don't ignore the potential for inland flooding from these intense events. This is happening already more frequently. This is documented. And so inland, there are still flooding issues that this kind of analysis can and should be carried out.

2. *Is there a tidal range at Kingston? If so, what stage of tide did you use? MHW, HHW?*

Yes, the tidal range is about 2-3 feet. The height of the MHHW is 3.0 feet, which is what we used as a base elevation. The COAST model is designed to add surges as a variable, above MHHW. In the case of Kingston, we had a FEMA FIS from 2007 that said the 100 year storm would be at 8.2 feet (NAVD 88 elevation) and the 10 year storm would be at 6 feet (NAVD 88) elevation. Therefore, in the model we entered 5.2 feet and 3 feet of surge, respectively, on top of MHHW. Then for each model year, we added sea level rise as an additional third value. This

was thoroughly discussed with our stakeholders and NY DEC and Scenic Hudson, our technical partners.

3. *Very powerful stuff, esp. the Google Earth images! Is the assessment for Kingston, NY published and publicly available? What does this cost?*

   We have not published yet, as we are in mid-process with Kingston. If you email me at jtlockman@catalysisadaptationpartners.com, I will provide an ftp site where you can download the full PowerPoint and kml outputs created to date, at no charge.

4. *Will the model allow you to map the future floodplain?*

   Yes, but that can also be done by simply using LiDAR, and adding a SLR amount to your existing flood study heights. COAST calculates damages for individual storm incidents and/or for cumulative damages from all probable storms over ranges of years. To map the future floodplain, all you would need were agreed upon height increments to add to your existing predicted flood heights, and good LiDAR.