Building Resilient Communities in the Face of Climate Change

A Resource for Local Communities

SUSAN CLAYTON, PH.D.
COLLEGE OF WOOSTER

LINDA SILKA, PH.D.
THE UNIVERSITY OF MAINE

CARLIE TROTT, M.S.
COLORADO STATE UNIVERSITY

DANIEL CHAPMAN, M.S.
UNIVERSITY OF MASSACHUSETTS
AMHERST

SARAH MANCOLL, M.S.
SOCIETY FOR THE PSYCHOLOGICAL
STUDY OF SOCIAL ISSUES

SPSSi

The Society for the Psychological Study of Social Issues

Forward

The National Health Security Strategy of the United States calls on people and their communities to prepare for the threats to health that come with disasters and emergencies, to be ready to protect themselves, and to remain resilient in the face of such threats. This strategy defines resilience as "the sustained ability of communities to withstand, adapt to, and recover from adversity." How can communities best incorporate resilience into their approaches and practices, especially in light of the potential consequences of climate change? This resource—prepared especially for community-based groups—provides information from the fields of psychology and other social sciences to help communities better understand and prepare for the adverse effects of climate change.

Why be concerned about the community impacts of climate change?

Evidence of a changing climate appears in every region and every state, but the effects vary from place to place as well as over time. Communities in the Northeastern United States, for example, might encounter growing challenges related to increased rainfall and sea level rise, while communities in the Southwestern United States might face lengthy droughts and intense wildfires. From Maine—where there will be more of a focus on infrastructure and fisheries—to California—where there will be more of a focus on water availability and agriculture—communities around the country will need to focus on resilience-building efforts that work for their unique populations and conditions.

Moreover, regional climate change risks are not in themselves sufficient to guide resilience planning. Strengthening *community* resilience most effectively takes place at the local level, with different considerations for urban versus rural areas, and with attention to local strengths and vulnerabilities. Successful resilience planning must also attend to the impacts of a changing climate on local populations.

While extreme weather events like hurricanes and floods will be seen with increasing frequency, changes in temperature and rising sea levels will likely affect many more areas.

These changes—from longer growing seasons to a higher incidence of mosquito-borne illnesses—will be more gradual, but no less significant. Effects of these changes will be not only geophysical but also psychosocial.

Local geophysical impacts: Geophysical impacts, the environmental risks and consequences associated with a changing climate, vary across regions and over time. A number of freely available tools exist online for identifying observed and anticipated geophysical impacts in your local area:

* The National Climate Assessment provides an in-depth look at climate change impacts on the U.S. Explore how climate is already affecting and will continue to affect your region here: http://nca2014.globalchange.gov/report#section-1948

* Investigate the impacts of climate change by region or by economic sector using the Environmental Protection Agency's regional impacts web tool, here: https://www3.epa.gov/climatechange/impacts/

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What are the potential consequences of climate change for communities?

Climate change may affect communities in multiple, sometimes unexpected ways. Some of these impacts could occur suddenly and "out of the blue." Abrupt effects such as hurricanes and floods could make roads and bridges suddenly impassable, shutting down electricity and the Internet for days or even weeks, and making food and other essentials unavailable.

* The Union of Concerned Scientists offers an interactive map to learn about local climate change impacts. The map features climate change information from across the globe where scientists have gathered evidence for climate changes that are already underway and where they are assessing the risks associated with further warming. Explore the signs of climate change in your region on this map, or download the application to view in Google Earth: http://www.climatehotmap.org/

Local psychosocial impacts: Psychosocial impacts refer to the effects of climate change along psychological and social dimensions. The health and well-being of individuals and societies are negatively affected by climate change in numerous ways—ranging from the clear and visible human costs of disaster to the less obvious private pain and strained relationships of agricultural crop failure and economic struggle. Although the direct and immediate psychosocial impacts of climate change, like those related to extreme weather, are more noticeable, perhaps more common are the psychosocial impacts that occur gradually and accumulate over time. For example, climate change will likely contribute to conflicts over resources, involuntary migration, loss of community cohesion, and numerous risks to mental health.

Like the geophysical impacts of climate change, psychosocial impacts are not uniform. Individuals and communities in different locations face different challenges. Strengthening community resilience at the local level requires attention to vulnerable livelihoods, economies, communities, and individuals (for example, the elderly) threatened by local geophysical impacts. Moreover, resilience-building efforts should attend to the most socially and economically disadvantaged populations in local areas, as the most under-resourced communities often face the worst consequences of climate change-related disruption. Community-based groups can learn more about the observed and anticipated psychosocial impacts of climate change, and ways to protect their communities, by accessing these resources:

- *Beyond Storms and Droughts: The Psychological Impact of Climate Change,* a 2014 report by ecoAmerica and the American Psychological Association: http://www.apa.org/science/about/psa/2014/10/climate-change.aspx

- Dr. Susan Clayton on Mental Health Issues and Climate Change: https://www.youtube.com/watch?v=zJ-wcx1EXao

Why are community groups essential in supporting local resilience?

Climate change has been characterized as a global problem with local solutions. All members of society will be impacted by climate change, but no single resilience-building process is adequate to address the risks and vulnerabilities of all communities everywhere. While atmospheric and physical, earth, and biological scientists provide critical information about local impacts and risks, and social scientists offer important insights into the psychological and social dimensions of climate change resilience, this work must be applied in real-world settings to benefit communities. If we operate only at the national scale we won't understand the complexities and differences across states and across communities. Community groups are uniquely well-positioned to strengthen local resilience because developing effective policies and programs requires understanding existing local capacities as well as firm grounding in local interests.Though community groups may vary in size, formality, and focus, they share key attributes that are vital to local resilience-building.

Community groups are:

AWARE
Community groups know about local realities and concerns—including local vulnerabilities, strengths, and capacities for change.

CONNECTED
Community groups are embedded within local social networks of community stakeholders, such as families and businesses.

INFLUENTIAL
Community groups embody local value systems that provide key conduits for translating science in locally-meaningful ways.

INVESTED
Community group members are constituents of local governance structures, and are the direct beneficiaries of local resilience-building policies and programs.

Though researchers and policymakers are often the most visible actors in the climate change arena, community groups—equipped with these key ingredients—are well-situated to influence, mobilize, and effect necessary and meaningful change at the local level. Perhaps most significantly, community groups, as "insiders," often possess levels of local knowledge, access, legitimacy, and leverage beyond the reach of others working to address climate change. Furthermore, people care about things that are close to them.

It is helpful for community groups to engage local policymakers. For decades, municipalities have translated global discussions into local practice by taking coordinated action on issues of sustainability. While international climate policy negotiations and agreements, as well as national and state laws and regulations, are essential to averting the worst effects of climate change, they often fail to address the needs of people on the ground. As a result, local-level (e.g., city, county) climate change policies and practices have emerged as critical in building community resilience. Not only are smaller-scale initiatives less encumbered by multi-level considerations in processes of development, approval, and implementation, they have the additional benefit of greater attentiveness to local opportunities, resources, and barriers. Community groups, as influential stakeholders, can lend insight into such considerations, leading to the development of policies with place-based, social, and cultural relevance to specific communities. The key role of community-policy partnerships in strengthening community resilience extends to their potential to influence neighboring city, state, and national climate change resilience agendas by demonstrating the efficacy of collaborative initiatives in taking proactive steps to protect local communities.

How can community groups support local resilience?

Communities are diverse places. The economy may be stable or unstable; the population may be rooted or transient; social connections may be strong or weak. Physical differences are also important: In some communities, investment in infrastructure has been strong while in other communities the roads, bridges, and housing stock is more vulnerable.

Some places are on the ocean where the climate change concern is with sea-level rise. Other places are in the middle of the country where drought and high precipitation events are very worrisome. Researchers have looked at the kinds of problem solving at which communities excel and at the kinds of community-based strategies that are particularly effective. These seven strategies have been shown to be particularly useful:

1. Identify and tap into community strengths

It is helpful to start with an asset analysis. Noting the many strengths already in place in one's community can suggest ways to address vulnerabilities. Existing strengths range from hard physical assets (infrastructure, climate) to the people assets (e.g., relationships, networks, knowledge, skills, and even the availability of free time) that often go unseen but keep the community functioning. These people assets are resources that can be mobilized for all kinds of challenges, including climate change.

Asset analyses can be quite informal. Some groups may have already done informal asset analyses: churches that host food pantries, fire departments that respond to disasters, grocery stores that track neighborhood changes so that they can have the right stock in place. The most helpful asset analyses are often ones for which assets are conceived broadly. Are there groups of retirees in your community that get together every day for coffee and know much of the history about where flooding has occurred and in which neighborhoods? Are there librarians who know how the library gets used as a gathering place in tough times? Are there groups of clergy who bring together broad knowledge of many different parts of the community and know who is at risk? Are there "Meals on Wheels" drivers or trash collectors or mail carriers or people who know communities because every weekend they go to garage sales and have a deep sense of what is going on from neighborhood to neighborhood? The information from these informal networks can guide plans for information provision or emergency supply chains in the case of a disaster.

2. Become aware of and attend to diverse needs

Community diversity includes diversity of vulnerability. The climate change literature has shown again and again that some people are more vulnerable than others to the effects of climate change. People who live in rural areas may face especially precarious possibilities of isolation from grocery stores and healthcare facilities if bridges and other infrastructure get destroyed or disrupted. Migrant workers who follow the seasons to work crops from state to state may be especially vulnerable to new mismatches in the timing of different crops as a consequence of climate change. There is also diversity in where people get their information. Resilient communities consider ways to ensure that all people are included in information networks.

3. Integrate climate change resilience activities into existing efforts

Most people are so time pressed that they have little free time to take on something new, urgent as it might be. It becomes important, therefore, to link climate change to the community activities and issues people are already working on. Rather than trying to stimulate interest, look for places where people are seeking information and provide it. Road workers, housebuilders, gardeners, and local officials are all looking for information about local conditions. Link climate change to the problems people are already trying to solve in order to build community resilience.

4. Emphasize the benefits

Talking only about problems can turn people off and induce a sense of helplessness. Emphasizing the benefits of building resilience in your community can be a more productive strategy. Is your community thinking about youth development? One community approached youth development by starting a youth-designed cable television show focusing on local environmental challenges. The youth interviewed their community elders and environmental officials, and these youth who are future leaders became adept at learning about strategies for problem solving. There can also be benefits for economic development and economic opportunity in moving toward sustainability. If your community becomes climate resilient, this will put the community in good stead for addressing all sorts of other community challenges.

5. Use history

Communities often celebrate their history at the same time that they are trying to make their way to an even better future. Elders often have many insights into what has and hasn't worked to address challenges in the past. They can see areas of continuity and discontinuity, change and renewal. Some communities bring elders into elementary classrooms to share stories of earlier life in the community. Cataloguing these experience-based judgments of change can be an important starting point for a community. It also helps the community create a shared identity that can bring people together to confront common challenges.

6. Learn across differences

In a diverse community, people have different skills, habits, needs, and interests. Issues and concerns about climate change can be divisive; there can be a tendency to talk to like-minded people to avoid the unpleasantness of disagreement. Or, people can see their task as one of persuading others to come to their side.

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Climate change can look different to different groups. In one Northeast community, people from a nearby very affluent neighborhood came to a very low-income neighborhood and told them that they must work to reduce their carbon footprint. The residents of the low-income neighborhood described feeling bad because, first, they had never heard of the term "carbon footprint," and, second, they were focused on trying to put food on the table and find and keep jobs. The two groups seemed to have little in common.

Climate change can, however, be a shared concern that elicits broad public engagement, and promoting climate change resilience can be one of the strongest prompts for coming together as a community. Consensus building is often more successful than persuasion or separation when working with disagreement within communities. People tend to interact with likeminded others. But hearing everyone's perspective tends to result in better solutions than when people only talk to others just like themselves.

7. Find boundary spanners

The challenge is to figure out how to create conditions in which each person's skills can be identified and can be contributed. "Boundary spanners" are people—in communities, in workplaces, and in disciplines—who readily cross boundaries and are able to identify the common ground. They talk and work with people across many different networks. Boundary spanners also make a difference: They help information flow and get used. Who are the boundary spanners in your community? Can we all learn to become better boundary spanners, perhaps through training? Boundary spanners can be an important and too often overlooked resource for building community resilience.

8. Learn across communities

It is inefficient to start from scratch, with each community recreating every little element. Communities should learn from what others have done—what has and hasn't been successful. They should also appreciate the diversity of communities and how that diversity might affect the practices that have been successful. To start, a community might want to look at what similar sized communities do. Then they can look at other communities that vary across size, place, and type, and go through the innovative process of not just taking what those communities did but learning what they did and adapting it to fit with their own community's characteristics, assets, and vulnerabilities. Small communities can provide models that can be replicated elsewhere, with modifications that take local characteristics into account.

Finally, it is important for communities to respect differences of scale. People often worry that tackling climate change at the local level won't make much of a difference because the problems are on such a grand, international scale, but some problems can only be tackled at the local level. Others, however, can best be addressed at the national or international level. We will need boundary spanners who can help us work across scales. This will help us see how to hand off the baton from town to town, from town to state, from state to nation, and from one nation to many.

What are the best messaging strategies?

Psychologists and other social scientists have been working extensively to better understand the "do's" and "don't's" of communicating about climate change. Below, we highlight five broad suggestions for best practices based on empirical research.

1. Focus on dimensions of climate change that connect directly to your local community

Climate change can be perceived as "psychologically distant"; it is often viewed as abstract, primarily affecting "other people," and a problem for the future. To help reduce psychological distance, focus on the specific ways that climate change will affect members of your community. For example, highlighting the ways in which climate change may impact local food production or water resources may reduce this psychological distance and help residents see the concrete ways in which climate change may affect them. You may also consider combining messages about potential negative impacts with specific plans for how your local community can help address these challenges.

Climate change may also be localized in a positive way by highlighting the co-benefits of taking action on climate change. For example, new local actions for increasing public transportation would not only help mitigate climate change, but would also reduce pollution and traffic while providing a valuable service to community members. Emphasizing these co-benefits may make the message appealing to a broader group of community members.

2. Use stories and narratives to personalize climate change for your audience

Climate change is often viewed as an issue where describing facts about the issue should be the most persuasive tactic. However, research indicates that storytelling and personalized narratives can be more effective in promoting public concern, and having personal conversations with friends and family about these issues is likely to be more persuasive than focusing only on the scientific evidence. Using personal stories, narratives, and anecdotes to communicate about the impacts of climate change has been found to be emotionally powerful and motivating for many, and having well-respected community members tell these stories is likely to help increase local concern about the issue and also reduce psychological distance.

Some examples of stories about climate change can be found here: www.climatestories.us

https://www.flickr.com/photos/tentenuk/17364606936/in/photostream/

3. Use carefully crafted visual imagery and emotional appeals to help increase engagement

Just as stories and narratives can be more motivating than facts and evidence alone, the use of visual imagery and emotional appeals, especially when tied to local climate change issues, can help increase community engagement. Research has found that photographic imagery that appears as authentic, depicts individuals taking personal action on climate change, and tells "new stories" about climate change

(e.g., making specific connections to your community, avoiding clichéd images such as smokestacks) can be particularly motivating. Messages that appeal to emotions are most effective when they underline the severity of the problem, but also point to specific, concrete actions people can take to address the issue.

Examples of effective visual climate change imagery and suggestions for their use can be found at: www.climatevisuals.org

4. Focus more on "what people can do" and less on "what people need to believe"

Climate change is a contentious issue, which can lead to polarization, unproductive dialogue, and inaction. In addition to localizing the issue for your community, you can help avoid contention by focusing communication efforts more on describing what community members can do to help and less on trying to ensure everyone believes the same things. It is likely to be more productive to focus on future action rather than past inaction. Providing community members with specific actions they can take to help address climate change, and making these actions relatively simple at first, may help increase levels of engagement over the long term. Where criticisms or disagreements do arise, focus the discussion on shared values (e.g., concern for the local community, future generations, and the environment) rather than on points of disagreement. This may help preserve dialogue and not alienate groups within the community.

https://www.flickr.com/photos/freethesun/8553349450/in/dateposted/

5. Identify community opinion leaders to help spread your message

Social influence and social norms can be very powerful. When trying to increase public climate change action, a useful approach is to identify "opinion leaders"—well-respected individuals from different areas of your community who all are concerned about the issue—and work with them to help spread your message to the community. Partnering with members from local businesses, government officials, farmers, non-profits, and libraries, for example, may help you reach members of your community that otherwise may not have heard or listened to your message.

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What other resources exist that could help my group?

http://climateoutreach.org/ - Climate Outreach offers resources and reports on communicating about climate change with different audiences (e.g., faith groups) and addressing various topics (e.g., psychological distance, uncertainty).

http://www.climatevisuals.org/ - Climate Visuals is an evidence-based database of imagery for climate change communication. The website "contains a growing, interactive library of images to provide inspiration and guidance for journalists, campaigners, bloggers and anyone else using imagery to communicate about climate change."

http://ctb.ku.edu/en - "The Community Toolbox" website is a free resource put together by psychologists that includes many examples of how communities have approached identifying their assets.

http://ecoamerica.org/research/ - ecoAmerica aims to "genuinely understand and address Americans' core concerns and how they relate to climate and sustainability." A number of reports and resources are freely available.

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http://climate.columbia.edu/ - The Columbia Climate Center integrates information from many fields to improve our "capacity to understand, predict, and respond to climate variability and change."

http://guide.cred.columbia.edu/index.html - *Psychology of Climate Change Communication* is a 2009 report by the Center for Research on Environmental Decisions.

http://climatecommunication.yale.edu/ - The Yale Program on Climate Change Communication offers many scientific research reports and other resources for communicating about climate change.

http://www.climateaccess.org/ - Climate Access is a networking and resource hub for engaging the public.

http://climatenexus.org/ - Climate Nexus provides fact sheets and other resources to "personalize and localize the climate and energy story."

http://www.policyconsensus.org/uncg/ - The Policy Consensus Network offers research-based advice on ways to achieve consensus where there is deep conflict and disagreement.

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