Opportunities for Equitable Adaptation in Cities

A Workshop Summary Report

GEORGETOWN CLIMATE CENTER
A Leading Resource for State and Federal Policy

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Equitable Climate Change Adaptation: In April 2016, the Georgetown Climate Center, in collaboration with the Urban Sustainability Director's Network (USDN), brought together city, state, and federal officials with environmental justice and social equity organizations for a workshop to discuss ways that cities can promote social equity and environmental justice in their efforts to prepare for the impacts of climate change. This report summarizes the day's proceedings, synthesizes comments and reflections of workshop participants, and provides examples of equitable adaptation happening in cities throughout the United States. The report also explores tangible actions city officials and environmental justice leaders can take to encourage community-driven planning and integrate social equity goals with climate adaptation goals.

The Center is grateful to the Kresge Foundation and Town Creek Foundation for supporting this workshop and this work. In developing this workshop and summary report, the Georgetown Climate Center collaborated with USDN members and our equity advisory group, which includes representatives from WE ACT for Environmental Justice, Emerald Cities Collaborative, the Gulf Coast Center for Law & Policy, and Future Insight Consulting. The authors are grateful to the local officials and members of our advisory group who graciously spent time participating in these discussions and providing invaluable feedback on this work.

Cover Photo: Courtesy of the City of Baltimore Office of Sustainability. Photographer: Kelly Lynch

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Overview

*Two of the biggest challenges facing the United States—and the world—*are the income inequalities that put the health and well-being of our poorest populations at risk, and climate change, which affects our most vulnerable populations even more than the public as a whole. The effects of climate change—including rising temperatures in urban areas, more polluted air, and increased extreme storms and stormwater—will disproportionally affect overburdened and low-income people and communities who are already facing significant economic and social challenges. Our success or failure in preparing for the impacts of climate change will be measured by how well we protect the most vulnerable and affected members of our communities, already suffering from a range of challenges including lack of economic opportunity, racism, and pollution.

In April 2016, the Georgetown Climate Center (GCC) and the Urban Sustainability Directors Network (USDN) convened a workshop bringing together nearly 50 thought leaders on equity and climate adaptation. The workshop focused on city-level actions that would support social justice goals and better prepare communities for the effects of climate change. Participants included city officials, representatives of environmental justice and social justice organizations, state and federal partners, and funders who support this work. Workshop participants were challenged to reflect on their own planning processes and identify ways that communities can address unequal risks; increase diversity, community participation, and leadership in adaptation planning; and ensure that climate change preparation efforts are benefiting and not negatively affecting those most at risk of impacts. Workshop participants discussed adaptation strategies, policies, and projects that could help cities achieve social justice, economic development, and climate adaptation goals.

This workshop summary describes the conversations and discussions of participants during the first day of this two-day workshop; as a result, some of the assertions in this report reflect views of participants and are not supported by citations. Recommendations described in this report are those of the participants, and do not necessarily reflect the views of Georgetown Climate Center or USDN. The agenda for the workshop and the full participant list is included at the end of this summary.

Participants identified the following key lessons over the course of the workshop:

- Achieving equitable adaptation outcomes will require an **inclusive process** that gives community members, especially low-income residents and people of color, **the opportunity to envision and set adaptation priorities and influence investments, policies, and programs pursued in their communities.**
- In many cities, a long history of mistrust between public agencies and community members will need to be addressed before and throughout the process for collaborative planning to be successful. **This will require a long-term commitment to relationship building that is institutionalized and not project-specific.**
- Cities can address inequity within their own agencies by **hiring more inclusively** and **identifying ways that city agencies currently reinforce inequities** (e.g. holding meetings at inconvenient times for working people or failing to include interpreters or notices in representative languages).
- Public agencies will benefit from **partnering with others**, including community-based organizations, community institutions, and foundations, to address climate and equity goals.
- Recognizing that climate change will affect some people and groups disproportionately, cities can address equity concerns by **directing resources to those areas and groups facing the greatest risks**.

- Equitable adaptation asks city leaders and staff to think not only about how and where they direct resources, but also how **certain policies might have negative consequences for particular groups or communities**. For example, low-income homeowners in floodplains will face increasing economic strain from rising flood insurance rates; this may force some homeowners to drop insurance coverage, which is the last line of defense in the event that flood impacts occur.
- Climate policies can address larger issues such as poverty, housing security, and racial equity. Likewise, policies and activities that are not traditionally seen as "climate adaptation," such as workforce development and arts festivals, can be linked with adaptation initiatives to improve the economic and social resilience of residents.
- Addressing climate change and equity will involve a long process of experimentation and creativity. Some cities and community-based organizations are already pushing boundaries and trying to identify best practices. Participants in the workshop shared ways that they are integrating equity considerations into their adaptation work; these examples are featured throughout this workshop summary.

Summary of Proceedings

The workshop focused on how city-level adaptation planning could be used to address social and environmental justice goals.

- In the first session, participants were asked to define equitable climate adaptation, identify best practices for ensuring equity in city planning processes, brainstorm actions and policy options that can promote equity in adaptation, and identify opportunities for facilitating progress in the field.
- In the second session, participants were asked to discuss policies that they are exploring or implementing to address inequitable climate risk. Participants broke into groups to discuss policies to:

Participants discuss affordable housing policy during a breakout session at the equity workshop.

1) link economic development and adaptation in ways that will benefit low-income and minority populations;
2) promote social resilience and social cohesion;
3) adaptively reuse vacant lands and underutilized open space to benefit low-income and minority residents; and
4) promote affordable-resilient housing and reduce displacement.

- Finally, the participants identified resources, lessons, and potential case study topics for an upcoming equity portal in the Georgetown Climate Center's online Adaptation Clearinghouse.

The prompting questions explored during each breakout session are laid out in the table below. These questions guided exploratory conversations. These conversations mark the start of a much longer and broader effort to fully explore and address issues of equity and adaptation.

Session Topics & Framing Questions

Climate change and disproportionate impacts Identify factors that contribute to a community's disproportionate risk.

Identify how structural racism and bias affect city decisionmaking and can increase disproportionate risk.

Identify and discuss factors that can promote or improve community resilience.

Equitable adaptation planning and community engagement What does equitable planning look like?

What approaches can cities use to ensure robust and meaningful community engagement or support community-led planning? What does this involve?

How do racial equity and social inclusion form the basis of planning, rather than serve as a component of it?

How do you know if a planning process is equitable?

How can cities leverage support from outside groups (community organizations, foundations, others)? What kind of resources are available to help?

Opportunities for cities to implement equitable adaptation policies Identify adaptation policies for addressing inequitable climate risk.

Identify adaptation policies that can support other economic and social resilience goals.

Identify policies that, if not designed or implemented properly, could have negative consequences for communities and people.

Reflections, community of practice, and equity portal Identify current resources that support equitable climate adaptation.

Identify resource needs and potential case studies.

Climate Change and Disproportionate Impacts

Factors that Contribute to a Community's Disproportionate Risk

Workshop participants were asked to identify the groups or communities in their own cities that face disproportionate risks from the impacts of climate change. The brainstormed list of groups is not exhaustive, but provides a starting place for city leaders who are seeking to engage stakeholders facing the most risks in planning processes, vulnerability analyses, and the development of adaptation policies.

Frontline communities and people facing the greatest climate risks

- Communities of color
- Elderly people
- Farming communities
- Immigrants
- Industrial employees
- Low-income residents
- Non-English speakers
- Outdoor workers
- People exposed to increasingly poor air quality and increased pollution
- People with preexisting illnesses
- People without access to insurance
- Public housing residents
- Refugees
- Single-headed households
- Small businesses
- Students
- Transient and homeless populations
- Tribal communities and tribal members
- Women
- Young children

Communities that are both highly exposed to climate risks and have less capacity or political power to respond to these risks are often referred to as "frontline communities" in the existing literature on equitable adaptation.[1] Workshop participants discussed the conditions or factors that contribute to the disproportionate risks that these groups face:

- *Lack of trust in government structures and/or officials* - If community members do not trust the government, it becomes much more difficult for officials to administer successful programs, warn people of impending risks, or create key partnerships to better prepare for, and respond to, climate impacts. Participants noted that a lack of trust may stem from long histories of political, social, and economic exclusion and institutional racism. This might apply to immigrants, communities of color, or any other groups who may have had negative experiences with government agencies or believe that government will not support their interests.
- *Cultural barriers* - People who speak English as a second language or do not speak English may find it difficult to engage if resources or materials are not translated. Other cultural barriers, such as lack of familiarity with the American governance structure, planning processes, financing systems, and legal systems may prevent some groups from engaging in city planning processes or accessing resources.

- *Lack of access to critical services* – People who have limited access to critical infrastructure and services such as hospitals, community centers, or transportation are put at greater risk during extreme weather events. Those with limited mobility or access to transportation can experience difficulty evacuating or accessing medical care that could protect them during and after an extreme event.

- *Lack of strong social networks* – Interpersonal ties between neighbors, families, and friends improve a person's resilience to climate change. These networks are safety nets – providing shelter, care, professional advice, and many other important services that make people less susceptible to shocks. Socially isolated communities or groups with limited mobility, like the elderly, have been shown to be more vulnerable to heat waves, flooding, and other extreme weather because of lack of access to services like cooling centers and medical treatment.[2]

- *Cumulative risks* – One challenge or stressor is often not enough to make someone less resilient. Instead, the people who are most at risk are those who face multiple stressors that wear down their resilience for extreme shocks. Climate change, from this perspective, is yet another risk factor that can compound existing socioeconomic factors, health challenges, and structural racism, among other stressors.

Structural Racism

Underlying the disproportionate risks faced by these communities are long histories of structural racism. Participants contemplated how the social, economic, and political systems that have evolved in the United States (and Canada) have routinely advantaged white and wealthy residents. The historical legacy of race-based housing segregation, lack of investment in public transit and other services, and exclusionary zoning practices are among the policies identified by participants as contributing to urban landscapes in which low-income and minority residents live in places more susceptible to damage, pollution, and other dangers. Public policy has often reinforced rather than reversed these existing inequities as wealthy residents have more influence in the political process and have more power to combat undesirable policies and land uses in their neighborhoods. Addressing structural racism is a daunting process for any city agency, since the root causes are often deeply embedded in a wide range of systems including the racial and economic make-up of city staff, the community's access to public transit, school performance, the allocation of city budgets, and racially biased policing, to name just a few.

Some causes of structural racism, however, are directly related to existing city processes that can be changed (although not necessarily easily). Participants reflected on ways public officials can recognize their own roles in creating and reinforcing structural racism and actively seek policies that reduce these inequities. As it relates to climate change, this might involve asking municipalities to assess climate risks when considering sites for affordable housing. It might involve finding better ways to hire locally and support job-training programs so that economically disadvantaged residents can benefit from job opportunities presented by investments in resilience. As a first step, however, it involves changing public engagement processes so that those residents facing the greatest risks can participate and determine what climate preparedness looks like in their communities and neighborhoods.

Assets that Contribute to a Community's Resilience

Participants also noted that how many of the same groups that face disproportionate risks from climate change are also characterized by unique resilience. These groups often have more experience responding to shocks and stressors. The coping mechanisms they employ could be better understood, supported, and replicated within climate preparedness policies. For example, "community assets" that can facilitate climate preparedness work include: faith-based organizations, ethnic networks, parent-teacher associations, public health

Existing community-based organizations often provide important lifelines during difficult times contributing to overall community resilience, but these groups need to be coordinated with, supported,

providers, and community-based organizations. These organizations often provide important lifelines and resources during difficult times. Participants recognized that more work can be done to better understand what social and community assets already exist in their cities, and to build partnerships and provide support to these existing resources. In doing this, city officials must be careful not to shift an increased burden on already underfunded community groups and services. Instead, cities must find ways to ensure continuous and ongoing investments in the organizations and networks that have already proven their value in serving frontline communities.

Community Examples Building on Existing Assets

Baltimore, MD

Baltimore works to leverage existing strengths within the community and to build greater social resilience through its Community Preparedness efforts. One example is the City's *Make a Plan, Build a Kit, Help Each Other* events, which gives residents the tools to prepare for disasters. During these events, residents share their stories, identify risks their communities face, and determine ways that climate change is likely to influence these risks. Additionally, residents work with local experts to develop an emergency plan and build an emergency preparedness kit that they can take home with them. This program aims to build trust between city officials and residents. It also aims to tap into the existing networks and strengths of residents to prepare themselves for disasters. The program focuses on building community adaptive capacity by encouraging neighbors to help each other, recognizing that in most situations neighbors are the first responders. For example, the emergency preparedness kits that residents make include cards that say "Help" in orange on one side and "Safe" in green on the other. These cards allow residents to alert their neighbors if they need help during a disaster or save time for rescuers in the event help is not needed.

Hunts Point, The Bronx, New York City

Community-based organizations can play a key role in helping communities prepare for and respond to disasters. The Hunts Point area of the Bronx was one of six finalists for the U.S. Department of Housing and Urban Development's Rebuild by Design (RBD) competition. Rebuild by Design was a design competition initiated in 2013 by the Hurricane Sandy Rebuilding Task Force and U.S. Department of Housing and Urban Development and supported by the Rockefeller Foundation and other public and private partners. Through the competition, architectural and design professionals were asked to develop innovative design solutions for resilient rebuilding in the aftermath of Hurricane Sandy, and to take climate change into consideration. The national nonprofit Emerald Cities Collaborative supported a collaboration between the local nonprofit The Point Community Development Corporation (The Point CDC) and the project's design team. Throughout the initial stages of the competition, The Point CDC, Emerald Cities Collaborative, and other partners brought together residents and faith-based organizations to work with the design team leading the application to develop innovative strategies for rebuilding the Hunts Point neighborhood and for protecting the Hunts Point Food Distribution Center, a critical economic asset in this region. The Point CDC and Emerald Cities Collaborative are helping with implementation of the RBD project by exploring ways that the city can integrate community ownership and workforce development as New York City develops a microgrid feasibility study for the Hunts Point region.

Equitable Adaptation Planning and Community Engagement

Participants explored ways they can bring more voices into adaptation planning processes and give more power to the community to set adaptation priorities. They reflected on the failings of traditional models of community outreach and engagement. Participants recognized that, historically, outreach efforts have not been inclusive nor have they brought a diversity of viewpoints to planning processes. While advocacy groups representing a defined set of stakeholders may elevate the needs of a select few, many community members have few advocates and may be easily forgotten or excluded from decisionmaking processes. Even when members of the public do participate, decisionmakers sometimes do not act on community feedback and priorities. As such, it is important to find ways for frontline communities to gain more input into city decisionmaking processes, for plans to reflect community input, and for decisionmakers to follow through on the community recommendations included in plans.

Cities should strive to foster more community-driven planning processes to encourage greater equity.

Ensuring a Just, Transparent, and Inclusive Process

In a recent planning process to adress heat vulnerability, the City of Seattle Office of Sustainability and Environment and consulting firm, Equity Matters assessed city efforts to engage and shift decisionmaking power into the hands of low-income communities and communities of color in a planning process. Seattle officials reasoned that a community-driven process would allow public agencies to better understand the complex and dynamic support systems that currently serve residents during extreme heat events and the actions the City could take to better serve residents. To support a community-driven process, Seattle experimented with unconventional outreach techniques, including scenario-based workshops where community members were asked to consider a range of climate projections estimating potential increases in summer warming and high heat events. Although the city was not able to achieve its ambitious goal of achieving a true community-driven process, city decisionmakers did gain key insights into community needs, such as the importance of posting information about cooling centers and heat risks in apartment complexes. City officials also learned strategies and techniques to foster more collaborative engagement with city residents and to increase the diversity of residents who are interested in and able to engage.

In a report analyzing Seattle's process,[3] Equity Matters drew on the "spectrum of community engagement" framework (depicted below) to assess the extent to which community engagement shifted power from institutions to residents to find solutions to heat risks.[4] This spectrum shows a progression of engagement between decisionmakers and the community: from simply informing residents what the city planned to do (on one end), to a community-driven process in which residents actually lead meetings, develop plans, and choose how to invest resources and what policies or programs should be implemented (on the other end of the spectrum).

Participants were asked to use the spectrum of engagement to brainstorm strategies to facilitate more collaborative and community-driven planning processes, and identified the following key lessons:

"Spectrum of community engagement" adapted from Equity Matters

- *Community-driven planning should be centered on community concerns* – The purpose of engaging a community is first to learn what community members want and then to collaboratively develop options to achieve community-set priorities. Community members should be brought in early on in the planning process and should be able to influence the design of the planning process and its outcomes.
- *Uncomfortable conversations* – City officials should be willing to allow for uncomfortable conversations about race, power, and past and current failings of public officials or the government in general.
- *Diverse and representative* – Equitable planning must involve a range of voices, including frontline communities that are especially vulnerable to climate risks.
- *Accountable* – To build trust, participants stressed the need for accountability and follow-through. It is not enough to develop a plan with community input; ultimately that plan must be put into action for the public to see the results of their engagement.

Overall, participants agreed that public officials should see themselves as a resource for the community, rather than seeing community engagement as just another "box to check" before a plan is adopted.

Participants noted that collaborative planning processes also require city leaders to address barriers to participation. Lack of access to transportation, inconvenient meeting times and locations, insufficient translation services, and lack of child care or access to meals can all inhibit the ability of residents to participate in community meetings. Providing food, stipends, or other incentives such as gift cards sends a message that the time and work residents put into the planning process is valuable and worthy of compensation. Cities will often need to find grants to support these engagement strategies, since providing stipends using public funds is often prohibited. In addition, community leaders may want to consider innovative ways to engage the public and specific groups. Community theaters, art centers, schools, senior citizen centers, and partnerships with local community institutions can all be powerful venues for engaging different types of residents and exciting residents about city initiatives. Participants also recognized that to encourage long-term and ongoing community engagement, planning has to be enjoyable and the community needs to see the benefit and outcomes of their participation.

City leaders can use community meetings to build their understanding of what the community values, to establish a process for moving a plan forward, and to set community priorities. Once communities make some decisions, city leaders should be accountable to deliver on promises and transparent about how they will implement the plan once adopted.

Participants noted that frontline communities should not only be sitting at the table, but also given opportunities to influence decisions. This will involve a process of learning and fact-finding since many residents may be relatively new to climate science or adaptation planning. City leaders can facilitate the process by providing clear resources (e.g., reports, presentations) that minimize jargon and technical language in favor of materials with graphics and maps that show locally relevant information about climate risks and vulnerabilities. Initial meetings should not focus on finding specific solutions, but should focus on creating trust with the community, a shared understanding of risk, and a common language for talking about risks. City leaders can use community meetings to build their understanding of what the community values, to establish a process for moving a plan forward, and to set community priorities. Once communities make some decisions, city leaders should be accountable to deliver on promises and transparent about how they will implement the plan once adopted.

Examples of Community-Driven Planning

Northern Manhattan, New York City

The environmental justice organization WE ACT presented its Northern Manhattan Climate Action Plan, which was based on the premise that it is not enough to connect people to city agencies; instead community members should do the planning themselves. Through a series of community workshops, participants were asked to consider how climate change would affect their community and to develop strategies for building resilience. The resulting plan stresses that building climate resilience involves fostering economic and political power within communities. Solutions should reorient systems of power to deepen democratic systems, build community capital, and promote collective ownership. The plan promotes the creation of energy democracy, in which community members invest in and own green energy systems that create jobs for local residents. Additionally, it calls for creating community spaces where meetings and movement-building activities can occur. These community spaces can support other goals outlined in the plan by providing a venue for drafting neighborhood level emergency response plans and advocating for participatory budgeting processes. Finally, many of these same plan elements, ranging from cooperatively managed enterprises to peer-to-peer communications programs, are meant to foster social cohesion. With greater social cohesion residents can plan ahead and respond faster to crises, while also working to prevent their community from being displaced due to climate change or gentrification.

Detroit, MI

Similar to The Northern Manhattan plan, Detroit's Climate Action Plan (forthcoming) is not being developed by the city, but by a coalition of community leaders who are part of the Detroit Climate Action Collaborative (DCAC). DCAC was convened by the community environmental organization Detroiters Working for Environmental Justice to bring together community groups, universities, environmental and public health organizations, businesses, and public officials to support climate planning in Detroit. Members of the DCAC have found that it is in their best interest to bring in diverse partners to participate in the climate planning process. Diverse participation was critical to achieving widespread buy-in and strengthening the plan through the unique perspectives brought by these different groups, especially residents. To enhance participation from the residential community and to better address their climate-related concerns, DCAC established the Detroit Climate Ambassadors. Ambassadors are Detroit residents who engage fellow residents to build awareness related to climate issues and collect community input to better define a grassroots vision for action. Additionally, rather than exclude businesses that are contributors to climate emissions, DCAC reasoned that involving these businesses could provide a forum for airing grievances and mitigating potential resistance from the outset. They used a business-to-business recruiting model, first working with some businesses (like DTE Energy) and then having those businesses reach out to others (e.g., General Motors, Ford) to grow the number of businesses participating in the planning process.

Challenges in City Governance for Addressing Equity

City officials described some of the barriers they face addressing equity through their work. Officials must often work in the context of limited budgets. Funds must often be spent under quick timelines, with little flexibility for robust and ongoing community engagement. Political processes can create an atmosphere in which a plan or program must get done quickly, and less importance and value is placed on community engagement as an ongoing opportunity to build collaboration and trust. Many public officials have been met with distrust when reaching out to a community and recognize that it will take years of trust-building to repair relations. They also feel the need to move quickly not only to prepare the community for the imminent threats of climate change, but also to address other social and economic stressors that have plagued communities for many years. City officials report that these constraints and the need to get things done means that they have to make some compromises that can frustrate goals to have more inclusive, collaborative, and ongoing planning processes.

Additionally, the structure of city governments often makes it difficult for officials to address the heart of problems. Sustainability directors (like those who participated in this event) are often leading city adaptation efforts. However, these directors do not have direct authority over public

health, economic development, housing, and other sectors that affect the resilience of frontline communities. As a result, equitable adaptation requires coordination and active involvement of multiple city departments. Breaking down city agency silos and mainstreaming equitable climate adaptation were seen as key steps needed to reduce the cumulative threats faced by frontline communities. However, even with better communication across agencies, political and budgetary constraints are likely to remain without external pressure from advocacy groups and residents, and leadership from top political figures (like mayors or city councilmembers).

City officials also recognized that they were not always best equipped to be the messenger or the convener of community-driven processes. At times, community-based organizations, churches, community leaders, and others might be more nimble and have deeper ties with the community. These organizations can be strong allies to support community-driven processes. If city officials choose to participate on the sidelines in a community-driven process, however, they should make every effort to integrate the recommendations developed through community dialogues into city decisionmaking.

Breaking down city agency silos and mainstreaming equitable climate adaptation were seen as key steps needed to reduce the cumulative threats faced by frontline communities.

Mechanisms to Improve Planning Processes

Participants highlighted many ways that cities can begin to build trust and develop more inclusive and transparent processes, and identified the following actions:

- *Hiring* – City governments should make a concerted effort to hire or formally collaborate with more people of color, low-income residents, and people who already have established trust within their communities. Participants noted that city hiring should be core to any equity strategy. Too often, public officials are not representative of the people they are serving and do not have deep ties within the community. As an initial step, cities could use fellowships and paid internships to bring community residents into city government.
- *Listening* – During community engagement processes, city officials should come ready to listen rather than sharing preconceived ideas about what they want to accomplish.
- *Building trust* – City officials can develop trust with community members by delivering on promises made, listening and responding to concerns even when they do not pertain to the topic on the table, and being transparent about actions taken and roadblocks that delay progress.
- *Convening community advisory councils* – City agencies can use community task forces to lead planning processes. Participants noted that community members should not only be able to make recommendations about planning goals, but should be given the power to influence budget allocations.
- *Leveraging philanthropy* – City governments should foster relationships with community nonprofits and foundations that are well trusted in the community and can address challenges public agencies are ill-equipped to resolve.
- *Educating staff* – City training programs should educate staff about the root causes of disproportionate risks, structural racism, and implicit bias.
- *Leveraging outside experts* – When appropriate, city officials should invite experts (e.g. planners, architects, engineers) to interact directly with residents to present projects and discuss pros and cons of project alternatives. Technical experts must be prepared to deliver information using plain language and with humility to avoid excluding participants.

- *Communicating using different formats* – City officials should use multiple formats and forums for messaging and outreach to ensure they reach a diverse range of residents. For example, older residents may rely more heavily on printed handouts and television, while younger residents may respond more to social media.
- *Building youth leadership* – City governments should actively encourage young people to take on leadership roles and build skills to represent their communities.

Creative Public Engagement Strategies

Participants brainstormed creative ways and best practices for bringing community members to the table. Ideas included:

- Hosting dinners where residents are invited to bring a friend to network and have conversations about climate change
- Hosting a "book club" where participants suggest, read, and discuss books on environmental justice
- Providing food, child care, translation services, and even stipends to encourage participation
- Going out to the community at pre-scheduled events (e.g., farmers markets, street fairs)
- Creating apps connecting residents to city or business services (e.g., businesses that offer green products)
- Hosting and providing grants to pay for community workshops where residents get to choose the topics and speakers
- Working through schools to educate students about climate risks and asking students to be part of planning processes to develop climate strategies
- Creating community advisory councils or task forces
- Hosting or attending community potlucks, block parties, or festivals to build community cohesion and provide fun venues to discuss policy options
- Mapping social networks and community assets and investing in these as resources
- Launching a climate change related photo contest
- Employing local artists as facilitators to graphically represent community discussions or to help with community storytelling

Resources to Support Equitable City Planning

Participants identified a number of analytical needs that would support equitable climate adaptation processes. These included:

- *Better socioeconomic and demographic data,* when paired with climate data, can help cities identify important stakeholders who should be included in planning processes. In addition to current demographic data, cities would benefit from data on projected demographic shifts related to climate displacement that may affect their regions.
- *Health impact assessments* can help cities understand the health consequences (negative or positive) of policy decisions.

- *Funding analyses* can help cities better understand how money is currently being spent and which groups are benefitting from city expenditures. This can help cities be more transparent about spending, make budgeting decisions using an equity framework, and be more strategic about allocating future funding.
- *Land use data* (e.g. new housing units permitted, ratio of land consumption to population growth, acres of urban parks, ratio of jobs to housing, etc.) can help cities better assess current needs and project the future changes and growth that are likely to occur as new development is integrated into the urban fabric. This can help cities distribute services and public amenities more equitably and keep pace with growing populations and climate risks.

In addition to these data needs, cities could also use more guidance on putting these data to use – for example, how to prioritize investments using climate and social vulnerability analyses. Even more, cities are recognizing that leveraging "citizen science" to collect data can be an effective way of building understanding of climate risks and creating community buy-in at early stages of a planning process. Asking community members to collect and analyze information allows for a natural process of "joint fact-finding" in which community members learn alongside city staff. This enables citizens to actively participate in meetings, with the knowledge and vocabulary they will need to interact with technical experts and elected officials. Cities could also use more guidance on how to promote and use citizen science effectively.

Opportunities for Cities to Implement Equitable Adaptation Policies

Workshop participants discussed policy options that addressed both equity goals and climate adaptation needs; below are highlights focusing on (1) economic development, (2) building social resilience, (3) use of open space, and (4) affordable housing.

Economic Development

The economic development group focused on local government strategies to increase job opportunities, support local businesses, and boost local economies through adaptation work, while also benefiting frontline communities and underemployed and economically disadvantaged residents. The group considered three primary questions in addressing these issues: (1) what economic opportunities are cities thinking about or undertaking with respect to climate adaptation and resilience; (2) what current economic challenges are cities already facing, and how will climate change affect the local economy; and (3) what legal and policy options are potential solutions to these economic development and equity challenges?

From these questions, participants identified several principal takeaways:

- Any economic development and equity discussion should focus on jobs and workforce development, with a particular focus on low-income and underserved communities. In order for those communities to fully benefit from resilience investments, workforce development is a critical component for ensuring that those investments are leading to local jobs. While shorter-term construction jobs can be found in a city with a strong economy, many local government officials struggle to provide more stable, longer-term employment for residents. The construction and maintenance of resilience projects can provide a viable source of jobs if residents are provided with appropriate training and local hiring is promoted.
- Climate change poses a substantial threat to economic development in many cities due to potential property and infrastructure loss within floodplains; heat risks to labor productivity, public health, and energy; extreme weather damage and disruptions for businesses; and shifting agricultural patterns that could drive up costs for food; among other things. These risks are particularly dire in low-income neighborhoods that may need help with business stabilization and continuity.
- Economic development and climate adaptation can be in tension with one another, depending on the robustness of the economy in that city. Cities with high growth and a skilled workforce (e.g., New York City) may be able to increase requirements for developers without driving business elsewhere, but other cities worry that increased regulations could drive businesses and the jobs they bring to cities where development is cheaper.

The group discussed (1) jobs and workforce development, including local hire policies and other programs and (2) safeguards against gentrification as economic development succeeds, and identified the following approaches:

- Community benefits agreements or preferences for local workers can be used to increase employment. Cleveland uses community benefits agreements to hire local people to fill clean energy jobs. This has worked well transitioning residents who formerly worked for the oil and gas industries to work on offshore wind projects instead. San Antonio has a 10-percent preference for contractors that hire local workers.[5] However, participants noted that in some locations local hire can be a "double-edged sword," because if workers get displaced due to increased housing costs, they may no longer be eligible for the local hire program.

- Job training and workforce development programs should be aligned with available or anticipate jobs; if a local government trains workers and has no jobs for them, or has jobs and no one to fill them, the programs do not work. One participating city did workforce development and training for work in the energy efficiency industry, but did not have enough jobs for trained workers at the end. City officials can work with the private sector to coordinate training and hiring for jobs where local adaptation needs could create new job opportunities (e.g., need for broad deployment of green infrastructure to managing changing precipitation patterns).
- Adaptation-related construction can bring jobs, and local-hire measures can be used to ensure that affected residents have the opportunity to benefit from the influx. The group also discussed the challenges of ensuring jobs for local residents not only during the construction phases of projects, but also longer term maintenance, which provides greater stability for workers. Build San Antonio Green[6] is an example of a community partner working with the city to install solar panels and provide sustainable jobs within the region.
- Safeguards against displacement for current residents are critical, including the need to provide and protect affordable housing. As cities eliminate the threat of climate impacts like flooding, how do they keep those neighborhoods affordable and also allow for development that is inclusive? Participants noted that community-based financial institutions and community land trusts can help increase rates of home ownership and keep financial resources within the community in order to build economic resilience in those neighborhoods.
- Displacement is also an issue for small businesses. For example, the U.S. Chamber Foundation's Business Civic Leadership Center (BCLC) estimated that up to 30 percent of the small businesses negatively affected by Hurricane Sandy permanently closed.[7] Additionally, adaptation may entail significant infrastructure construction, which can be damaging to nearby businesses if safeguards are not taken to prevent disruption.
- Economic development can provide a way to discuss climate adaptation and equity in places where those conversations are politically challenging. One participant discussed Prince George's County, MD, where county council members advocated for a green infrastructure program as an economic development opportunity. Other participants discussed terms that were acceptable in place of "equity" in their jurisdictions, including "inclusive," "fair," and "just." Where climate change is a challenging topic, participants discussed ways that different framing could be used to speak to different audiences (e.g., talking to farmers about extreme weather and yield productivity instead of climate change).

Community Example

Washington, DC

Washington, DC is exploring opportunities to expand local hiring and workforce development programs to other areas in which the city is making resiliency investments, like green infrastructure. City officials are looking at the Evergreen Cooperative model in Cleveland to create an employee cooperative to train residents on installing, operating, and maintaining green infrastructure projects. This would help economically disadvantaged residents benefit from the widespread investment in green infrastructure that the city expects in the coming years.

Washington, DC has already established a precedent for local hire programs through DC Water Works!, an initiative that seeks to boost local jobs as the District invests in large-scale water infrastructure programs. The program targets advertisements of water jobs to local residents, encourages job training and apprenticeship programs, and encourages DC water contractors to interview and hire District residents. For example, DC Water has a mentor program to help local residents develop the skills needed to install and maintain green infrastructure and to become part of the contractor workforce tapped by the city to implement these projects.

Social Resilience

The social resilience group focused on how local governments can help build social cohesion in communities to enhance resilience. Social cohesion—defined as the degree to which communities support the overall well-being of all members, create a sense of belonging, and promote trust—is viewed as an important indicator of how well a community will be able to respond to stressors such as natural disasters or economic downturns.[8] In a recent report, the Center for American Progress (CAP) argued that social cohesion should be actively fostered in any plan to address climate preparedness.[9] CAP reasons that cohesive communities will be better planning partners as they are more aware of and able to identify existing vulnerabilities and assets. Additionally, during an extreme weather event, cohesive communities will be better positioned to assist with emergency response activities, checking on neighbors and moving resources where they are needed. Finally, after an extreme weather event, cohesive communities can work together to prevent long periods of displacement, rebuild their neighborhoods, or even negotiate acceptable relocation plans.

The social resilience breakout group considered the following three questions: (1) what does social resilience look like as it relates to preparing for climate change and responding to extreme weather equitably; (2) what are policies that can support social resilience; and (3) what key policy considerations should decisionmakers pay special attention to?

- Out of these topics, participants identified the following three takeaways:
- A socially resilient and cohesive community is better able to self-determine the actions that will best prepare it for climate change and how recovery efforts will take place after an extreme weather event.
- Public agencies and community-based organizations can support social cohesion by providing people with the opportunity and tools to work together to create a shared vision of a resilient community and the support to carry out that vision. Inviting community members to take a more active role in resilience campaigns can be a more efficient way of allocating limited funding.
- Public officials should recognize that social resilience may not look the same everywhere and should listen to residents to figure out what social resilience means within the context of their own city, and within neighborhoods.
- The group brainstormed actions local governments could take to increase social resilience, and discussed the following strategies:
- Local governments can actively work with community-based organizations with strong ties in their neighborhoods, such as church groups or other cultural institutions. City officials should first speak with residents to identify which organizations or community leaders they already trust. Resources can be directed to community-based organizations to support and lead planning and community education, and to implement resilience projects.
- Some cities like Cleveland and Baltimore are fostering local leadership and peer-to-peer organizing by identifying, training, and working with "climate ambassadors." Climate ambassadors are residents who are trained to communicate about climate change and work with their communities to lead local-climate preparedness initiatives. City officials report challenges, however, because many funding sources do not allow subgrants to community institutions or leaders. Additionally, most climate preparedness grants have one-year timeframes rather than the multi-year funding that is necessary to developing sustained and effective programs. In those cases, cities may need to rely more heavily on partnerships and find ways that city officials can collaborate with and find funding to support existing neighborhood-level initiatives.

- To increase social resilience after an extreme weather event, city officials can partner with organizations and local institutions to serve as distribution points for resources and basic services; and community members can help identify existing organizations that can most effectively play these roles.
- Cities can also foster social cohesion by providing more opportunities for neighbors to meet and engage with each other on topics of risk and resilience. This might also include efforts to promote, fund, or ease permitting for summer concerts, block parties, street festivals, or other community events, unrelated to climate change or resilience. Public agencies can partner with community-based organizations, schools, and local businesses to brainstorm ways to get people to be more active in and connected to their own communities.

The main challenge to building social resilience is a recognition that the strategies that may be effective in one community may not translate to another. For example, a socially cohesive community may not be defined by geography (but instead center around ethnic ties or faith, etc.). Some social networks that provide important services such as housing assistance, job assistance, and job training can span city, state, and even international borders. This can make it challenging to identify the best ways to tap into these social networks. Additionally, in some communities existing tensions between groups of residents may make it necessary to deploy multiple strategies aimed at various audiences or to find ways to encourage community healing before trying to build social resilience through strategies like those identified above.

Participants also focused on the need to ensure that social cohesion and trust in government is protected after a traumatic experience, like an extreme weather event. These events can be triggers that encourage neighbors to meet one another and work together towards a common goal, such as rebuilding. However, they can also prove to be lost opportunities for public agencies if cities appear unresponsive or insensitive to community needs. Even more, trauma can break down existing social cohesion if community members are displaced or struggling through depression, economic struggles, and other common post-disaster challenges. Participants also discussed the importance of finding culturally sensitive ways to address trauma after a disaster event, noting that traditional psychologists might serve some communities, while others might be better served through religious leaders, exercise and recreational programs, or other forms of therapy and outreach.

The group also discussed potential ways that communities could measure social resilience and cohesion. One person suggested that the best way to determine indicators would be to work with the community directly to figure out the best local measures of cohesion and resilience. Other ideas included surveying community members about their knowledge of public resources and trust in neighbors, monitoring participation in local government through indicators such as voter registration or attendance at public meetings, and assessing participation in community events such as block parties.

Community Examples

Cleveland, OH

The City of Cleveland is partnering with community-based organizations to encourage neighborhood-level action on climate adaptation by using funding from the Kresge Foundation to provide subgrants directly to neighborhood nonprofits. These nonprofits will lead resiliency planning within each of four neighborhoods selected; the city will act as a partner and coordinator. Community development corporations (CDCs) selected 16 climate ambassadors to work in the neighborhoods, and ambassadors will receive a small stipend to support their work engaging their neighbors. Additionally, funding will be available within each neighborhood to support projects that the climate ambassador and neighborhood groups identify as priorities. The city is still refining its own role in the process, attempting to track whether this planning model improves community cohesion, and integrating the findings from the pilots in these four neighborhoods into larger city plans and planning processes.

Baltimore, MD

Baltimore officials are developing four resiliency hubs in different high-risk neighborhoods throughout the city. Planners prioritized facilities that are not city-owned but are already trusted centers in the community. The resiliency hubs are meant to be managed by people who live or work in those communities. The city's role is to provide funding to retrofit existing buildings and surrounding lots to ensure that these buildings can withstand and stay online during any emergency event, support emergency response efforts, and enhance long-term community resilience. These resilience hubs are staging areas to distribute disaster materials and information, provide food and water, and can serve as meeting spaces for affected residents. These hubs are also being used to supply meals to children who are not being fed during disasters because they typically eat lunch at school.

Using Open Space

The open space group focused on ways cities can create and enhance open space to promote both equity and adaptation. This group discussed opportunities to "adaptively reuse" vacant and under-used properties for green infrastructure, flood mitigation, and tree planting. In this report, the term adaptive reuse is used to mean the repurposing a site or building in a way that will help a community prepare for the impacts of climate change and for a purpose other than what it was originally built or designed for. Participants also discussed how to ensure an equitable distribution of green and public spaces among neighborhoods. This group framed its discussion around three primary questions: (1) what current programs or policies does each city have for acquiring, preserving and improving open space; (2) how are cities adapting these programs to promote climate resilience; and (3) how are cities ensuring that these efforts will benefit the most at-risk communities?

Out of these discussions, three primary takeaways emerged:

- Many aging cities have blighted, vacant, and contaminated properties that depress property values, take property tax revenues out of city coffers, and have other adverse effects like increased crime. Adaptive reuse of vacant and blighted parcels can be a good way to put these lands back into productive use while also revitalizing economically distressed neighborhoods and addressing other environmental stressors and climate change risks. Cities, however, struggle to develop policies to do so.
- Cities have many tools for creating or enhancing open space or vacant lands for adaptation purposes (e.g., land banks, tax incentives, etc.), but they need help figuring out how to use these tools and target programs to benefit frontline communities.
- Cities need help finding and combining funding streams to support this adaptive reuse and open space programs.

Participants discussed many existing programs and policies for repurposing vacant and under-used

open space:

- Vacant and blighted parcels can be acquired through land banks and redevelopment authorities.
- Cities can repurpose vacant parcels to create pocket parks and green infrastructure to manage stormwater.
- Cities can direct tree planting efforts to areas of the community that face the most risk from rising temperatures.
- Cities can work with housing authorities to enhance open space on public housing campuses.
- Cities can restore river and stream corridors to manage flooding, provide recreational open space, and improve habitats.
- Participants also discussed options for enhancing and restoring vacant or underused open space in ways that will promote climate resilience and provide everyday recreational or social benefits.

Cities face several challenges in repurposing open space for adaptive purposes:

- Many cities are up against borrowing limits and therefore cannot fund these types of investments through bonds. As a result, many cities look to fund land acquisition and improvements through grant programs that tend to have limitations. For example, grant funds often can only be used for specified purposes like water quality improvements, economic development, or disaster recovery and hazard mitigation. City officials find it difficult to figure out which funding sources can be applied to different reuse projects and how to combine different streams of funding for a comprehensive project that delivers multiple benefits (e.g. improves water quality, provides recreational space, enhances habitat, improves air quality, lowers air temperatures, increases property values, and keep trees alive, etc.). City officials also struggle to identify funding sources to maintain these investments once they are installed.
- Cities struggle with how and whether to engage the public in planning when there is no funding available for implementation. City officials are worried that by opening discussions with no funds for implementation, they may further diminish trust between government and the community if they are unable to act on the plan that is developed.
- Participants expressed general concerns that these types of investments could lead to gentrification and displacement. City officials need tools to help them align these types of programs with other land-use strategies for encouraging and maintaining affordable and resilient housing in areas that receive these investments.
- Participants also expressed the need for help aligning local-hiring policies and workforce development with adaptive reuse programs. Resilience investments to install green infrastructure on vacant lands, for example, could create job opportunities for economically disadvantaged residents, and job training programs could provide residents with the necessary skills to build, operate, and maintain these projects.
- Participants discussed the challenges coordinating across the range of government agencies that are needed to effectively deploy open space for adaptation purposes (economic development, public housing, public works, water/wastewater utilities, etc.).

Community Examples

New York City Housing Authority, NY

The New York City Housing Authority has worked to implement a comprehensive and innovative green infrastructure project on public housing campuses that were damaged during Hurricane Sandy through its "Stormwater Management Through Placemaking" project. The planned investment would reduce flood risks during heavy downpours and also provide everyday green space, recreational amenities, and job-training opportunities. NYCHA is struggling to identify sources of funding to support this work.

Pittsburgh, PA

In 2015, the City of Pittsburgh launched the P4 Initiative, a framework that focuses on people, planet, place, and performance. As the city is experiencing a significant amount of new growth, the measures are designed to ensure that new development benefits all people, enhances a sense of place, contributes to a healthier planet, and achieves the highest levels of financial and social performance. To support these goals, Pittsburgh developed performance metrics that feed into a scoring system that informs public investments for the city (). A number of these metrics support resiliency by encouraging more green and open space. For example, a project can receive up to 4 points for using green infrastructure (based on percentage of rainfall the can be captured), 1 point for on-site retention, and 2 points for creating urban open space (meant for recreation). Notably, projects also get points for creating jobs and career opportunities.

Baltimore, MD

Baltimore has a "Vacants to Value" program, in which the city is streamlining the process to put a property into receivership so that non-profits, developers, and homebuyers can use a suite of incentives to rehabilitate and reuse the property. Baltimore recognized that blight can be destructive for whole neighborhoods by decreasing property values. This program not only focuses on improving the housing stock and encouraging more widespread redevelopment, but also aims to increase and improve public space. The program includes an "adopt-a-lot" program that allows community members to create community gardens and neighborhood green spaces on city-owned lots. After a lot has been maintained for five years, community members can apply to have it protected as a land trust through the city. The current program connects community members with landscape architects who have identified eight different ways to repurpose vacant lots.

Affordable Housing

The affordable housing group focused on ways cities can address the need to create and maintain housing that is affordable for low- and moderate-income residents and also resilient to the impacts of climate change. Protecting affordable housing will become increasingly important to ensuring the climate resilience of city residents. The building stock in lower-income communities is often at increased risk due to historic patterns of development in areas vulnerable to natural hazards and underinvestment in public infrastructure in less-affluent neighborhoods. Residents in these areas often also have more limited financial capacity to weather or recover from the economic shocks imposed by disasters.[10]

When creating housing resilience, cities should consider measures to ensure that structural improvements do not compromise affordability by raising the costs to build housing or by contributing to displacement through gentrification. To respond to these challenges, the group addressed three primary questions: (1) what existing efforts are cities undertaking to promote and maintain resilient affordable housing; (2) what are the principal barriers to creating affordable, resilient housing; and (3) what support do cities need to promote resilient affordable housing? Out of these topics, three takeaways emerged:

- Although low- and moderate-income communities are likely to experience greater risks from climate change, few places have focused on the unique challenges climate change will pose for the quantity and quality of affordable housing.

- The biggest challenges to developing and maintaining resilient affordable housing are the same challenges that cities, planners, and communities have experienced when attempting to promote affordable housing more generally: lack of funding and political pushback over the creation of additional density and the siting of affordable housing developments.
- City officials should be sensitive to the potential for unintended consequences from efforts to address climate change in low- and moderate income communities. For example, buyout programs can contribute to social dislocation if bought-out homeowners relocate out of their neighborhoods and away from their family, neighbors, and other community connections.

Although the group identified numerous existing programs and policies aimed at maintaining and expanding supplies of affordable housing, participants did not report any affordable housing programs that were specifically intended to bolster climate resilience. Among the initiatives the group identified, however, several could potentially be adjusted to accommodate, or even foster, resilience measures. The initiatives discussed included the following:

- Using inclusionary zoning to require that a certain share of new construction be affordable and resilient to climate impacts can be a way to increase safe housing options for low or moderate income households. Alternatively, assessing special development fees that can be directed towards building more affordable housing can help ensure a larger supply of affordable units. The regulations governing these programs could be drafted to include climate resilience for new units. (The group noted, however, that these initiatives may be insufficient to meet the full need for affordable housing. First, not enough new construction will take place in most communities to meet the existing need for affordable housing. Second, inclusionary zoning policies generate affordable housing only when local demand is strong enough to drive new construction. High demand, however, also drives higher housing prices overall, which will place more and more housing out of financial reach for low and moderate-income residents.)[11]
- Amending zoning laws to increase allowable residential density could help increase affordable housing supply. Some of these efforts include allowing additional dwelling units on single lots and reducing or eliminating parking requirements for new construction around transit to reduce costs for developers.[12] To the extent that increased density is targeted in areas less likely to experience climate impacts—for example, high and dry to avoid flooding—this could be an effective method to improve resilience for low- and moderate-income residents.
- Passing anti-retaliation ordinances makes it easier for tenants to report housing and building code violations, including violations of regulations related to climate resilience, such as requirements to provide working air conditioning, to elevate electrical systems out of basements that are susceptible to flooding, to install shatter-resistant windows, or to weatherize units.
- Existing federal funding programs, such as traditional housing retrofits initiatives through the U.S. Department of Housing and Urban Development's HOME and Community Development Block Grant (CDBG) programs, represent an important source of funding for the maintenance and improvement of affordable housing stocks. The group noted that HUD's Rental Assistance Demonstration (RAD) may point the way to future resilience investments in low- and moderate-income housing. RAD aims to leverage public and private investments by converting housing units to private ownership under the Section 8 Housing Choice Voucher (HCV) program, which provides subsidies to low-income residents to rent housing in the private market. HCV already includes certain housing quality requirements to promote safe, sanitary, and comfortable conditions.[13] HUD could incorporate resilience requirements into this program, and provide funding similar to past efforts to support weatherization and energy efficiency in HCV units to encourage landlords to participate.

The most significant barriers to resilient affordable housing identified by participants mirrored barriers that frequently exist for affordable housing more generally. Efforts to increase the supply of affordable housing, such as increasing residential density, often encounter political resistance. Participants also indicated that there is already a lack of available funding to build, subsidize, and

maintain affordable housing. This lack of funding applies equally to resilience efforts for low- and moderate-income housing. Participants noted that the funding that does exist, such as CDBG, is often used to fund many competing city priorities, such as investments to build or retrofit infrastructure.

Participants observed that as cities prepare for the impacts of climate change, special attention must be paid to low- and moderate-income communities. These communities are frequently on the frontlines—they are located in less desirable areas at risk to natural hazards, such as flooding. The group pointed to New Orleans' low-lying Lower Ninth Ward, vast swaths of which were destroyed during Hurricane Katrina. The group expressed concern that patterns of locating lower-income communities in more vulnerable areas could be exacerbated in the future as the real estate market begins to increasingly factor climate risks into housing prices, leading some exposed areas to lose real estate value. Not only are some low- and moderate-income communities at greater risk, they also face financial constraints that reduce their capacity to mitigate their risks before a disaster, to maintain insurance coverage, and to recover after disasters.

Finally, the group stressed that climate-resilience efforts must be carefully designed because they have the capacity to harm low- and moderate-income communities by raising the cost of housing. Increases could either be direct (e.g., by requiring retrofits) or indirect (e.g., by making neighborhoods more desirable and, therefore, more expensive). Participants indicated that data and monitoring are needed to assess the impacts of resilience investments on the affordability of housing. Data that will help cities determine the scope of the problem will make help cities address these challenges. The group also noted that when cities conduct buyouts of vulnerable properties, they should consider displacement and the potential impacts on social cohesion.

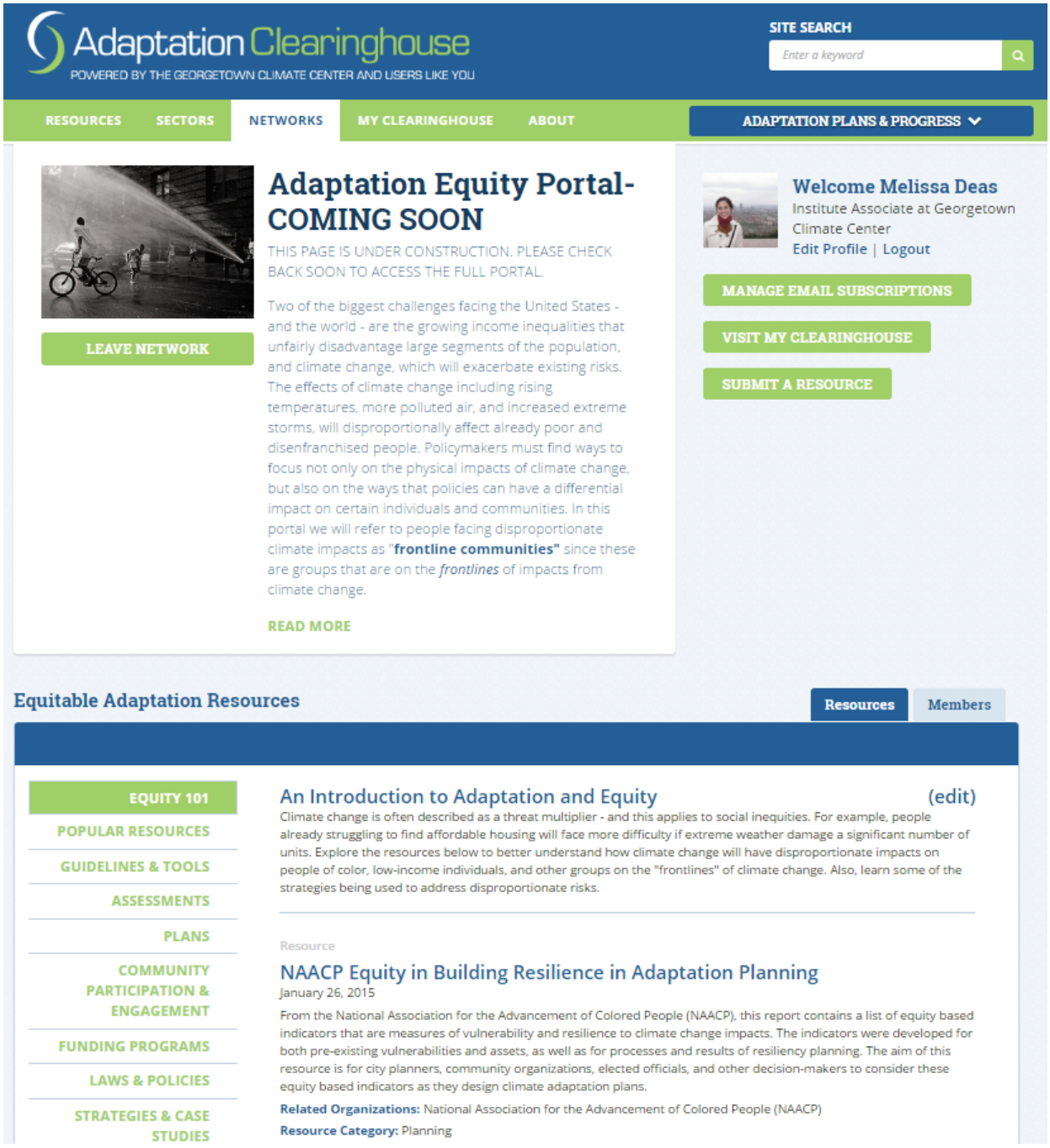
Community Examples

New Orleans, LA

New Orleans decisionmakers understand that the city must figure out how to live with water. Part of its strategy must involve retrofitting homes to better withstand flooding. One of the difficulties the city faces is how to finance these retrofits, since the costs can be prohibitive for many property owners. New Orleans is exploring using the Property Assessed Clean Energy (PACE) financing model to support flood mitigation retrofits. Many jurisdictions have successfully used PACE financing to support energy efficiency retrofits, but use of this strategy to finance flood retrofits would be a novel approach that has only been authorized in a couple of states. New Orleans is also considering how to craft a PACE program that can distribute resources equitably to lower- and moderate-income homeowners who have the greatest need but who may have lower credit ratings and therefore may not qualify for loans. Additionally, some residents may need additional assistance filling out the complex paperwork that can be required to apply for these programs. New Orleans is exploring a PACE model used by San Francisco to finance seismic retrofits.

Creating a Community of Practice

The workshop included a discussion of ways to encourage more progress on equitable climate adaptation going forward. The Georgetown Climate Center presented a beta-version of a web-based portal "Adaptation Equity Portal" that will be part of its Adaptation Clearinghouse (www.adaptationclearinghouse.org). The portal will organize and showcase resources aimed at addressing climate adaptation using a social justice and equity lens. Over the next few months, GCC will be working with its environmental justice advisory group and USDN cities to build and refine this portal.



Mock-up of the Adaptation Equity Portal on GCC's Adaptation Clearinghouse.

Based on our literature review and workshop discussion, it is clear that equity is an emerging issue in the field of adaptation and, as a result, there are few existing resources and tools specific to this topic. GCC has identified 140 potential resources to include in the Climate Equity Portal, but only 25 of these 140 resources explicitly address equity concerns in the context of adapting to the impacts of climate change.

Many of the existing resources focus on analyzing the problem and the challenges of disproportionate climate change risks. Some focus on how to build equity through the planning process. Few resources, however, provide concrete strategies for considering equity in adaptation plans and policies. There are limited examples of funding opportunities or examples of concrete programs, policies, laws, or regulations that have been adopted to promote equity in the climate adaptation context. GCC will continue to assess the field and work with partners to address these gaps. Additionally, GCC will work to create additional resources (like case studies) to capture the great work cities are already doing that might not be captured by existing plans, assessments, reports, formal funding programs, or laws and policies.

GCC used the final session to present its Adaptation Clearinghouse equity portal project and to collect initial feedback on what resources should go into the database. The group identified the resources below:

Resources:

- *Government Alliance on Race and Equity*: Advancing Racial Equity and Transforming Government: http://racialequityalliance.org/newsite/wp-content/uploads/2015/02/GARE-Resource_Guide.pdf; Contracting for Equity: Best Local Government Practices that Advance Racial Equity in Government Contracting and Procurement: http://racialequityalliance.org/newsite/wp-content/uploads/2015/12/GARE-Contract_For_Equity.pdf
- *Race Forward*: Green Equity Toolkit: Advancing Race, Gender and Economic Equity in the Green Economy: https://www.raceforward.org/research/reports/green-equity-toolkit-advancing-race-gender-and-economic-equity-green-economy
- *Center for Social Inclusion*: Energy democracy: Co-Op Power: A profile in cooperative ownership: http://www.centerforsocialinclusion.org/wp-content/uploads/2016/02/Energy-Democracy-Co-op-Power.pdf; Let's Talk About Race: How Racially Explicit Messaging Can Advance Equity: https://www.centerforsocialinclusion.org/lets-talk-about-race-how-racially-explicit-messaging-can-advance-equity/
- *City of Oakland*: Community-Based Climate Adaptation Planning: Case Study of Oakland, California: http://www.adaptationclearinghouse.org/resources/community-based-climate-adaptation-planning-case-study-of-oakland-california.html
- *Movement Strategy Center*: Community-Driven Climate Resilience Planning: A Framework: http://movementbuilding.movementstrategy.org/media/docs/7933_MSC-Community-CRPlanning.pdf
- *City of Detroit*: Foundations for Community Climate Action: Defining Climate Change Vulnerability in Detroit: http://graham.umich.edu/media/files/ClimateChateActionDetroit.pdf; Detroit Environmental Agenda: http://detroitenv.org/read-the-report/#wpcf7-f645-p119-o1
- *National Institute of Standards and Technology*: Community Resilience Economic Decision Guide for Buildings and Infrastructure Systems: http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1197.pdf
- *City of Portland*: June 2015 Climate Action Plan: http://www.adaptationclearinghouse.org/resources/city-of-portland-and-multnomah-county-climate-action-plan-2015.html
- *Policy Links Equity Atlas*: National Equity Atlas: http://nationalequityatlas.org/

Participants at the equity workshop took a break from the convening and conversation to take a picture with Baltimore's sustainability and resiliency champion turtle, "Shelfie".

- *Full Employment for All*: The Social and Economic Benefits of Race and Gender Equity in Employment: http://www.policylink.org/sites/default/files/Full_Employment_for_All.pdf
- *Angela Parks*: Everybody's Movement - Environmental Justice and Climate Change: https://www.energyactioncoalition.org/sites/wearepowershift.org/files/everybodysmovement_AngelaPark.pdf
- *Michigan Department of Health*: Michigan Climate and Healthy Adaptation Plan (2010-2015 Strategic Plan): http://www.adaptationclearinghouse.org/resources/michigan-climate-and-health-adaptation-plan-mi-chap-2010-2015-strategic-plan.html
- *Maryland's CoastSmart Program:* Maryland DNR Coast Smart Communities Initiative: http://www.adaptationclearinghouse.org/resources/maryland-dnr-coast-smart-communities-initiative.html; Community Scorecard: http://dnr2.maryland.gov/ccs/coastsmart/Documents/scorecard.pdf
- *City of Baltimore*: Baltimore's Disaster Preparedness and Planning Project: http://www.adaptationclearinghouse.org/resources/baltimore-s-disaster-preparedness-and-planning-project-dp3.html
- *City and County of San Francisco*: SF Heat Vulnerability Index: http://sfgov.maps.arcgis.com/home/webmap/viewer.html?webmap=49b24eda433143808a9e4fd29ba417bd&extent=-122.5563,37.7082,-122.3027,37.8261; Climate & Health Understanding the Risk: An Assessment of San Francisco's Vulnerability to Extreme Heat Events: http://empowersf.org/wp-content/uploads/2014/03/SFDPH-climate-and-health-report-2013.pdf; SF Program On Health, Equity and Sustainability (ORG): http://www.sfhealthequity.org/elements/climate
- *The Nature Conservancy*: Community Resilience Building Workshop and Guide: http://www.adaptationclearinghouse.org/resources/community-resilience-building-workshop-and-guide.html
- *The Trust for Public Land:* Climate –Smart Cities: https://www.tpl.org/services/climate-smart-cities
- *The Water Institute of the Gulf*: The Water Institute of the Gulf- Louisiana Coastal Adaptation Toolkit: http://cdn.thewaterinstitute.org/files/pdfs/WaterInstitute_LACoastalAdaptationToolkit_3-31-2014.pdf

- *Kresge, Island Press*: Bounce Forward – Urban Resilience in an Era of Climate Change: http://www.adaptationclearinghouse.org/resources/bounce-forward-eo-urban-resilience-in-an-era-of-climate-change.html
- *City Tree Plans*: The Cleveland Tree Plan: http://www.city.cleveland.oh.us/sites/default/files/forms_publications/ClevelandTreePlan.pdf
- *City of Pittsburgh*: Pittsburgh Urban Forest master Plan: https://issuu.com/treepittsburgh/docs/final_pittsburgh_urban_forest_management_plan_augu
- *Denver Parks*: Denver's Game Plan- creating a strategy for our future (Denver Parks): https://www.denvergov.org/content/denvergov/en/denver-parks-and-recreation/planning/master-plans.html ; see chapter 7: https://www.denvergov.org/content/dam/denvergov/Portals/747/documents/planning/master_plans/game_plan/game_plan_7_equity.pdf
- *Bay Conservation and Development Commission*: Adapting to Rising Tides White Paper—Addressing Social Vulnerability and Equity in Climate Change Adaptation Planning: http://www.adaptingtorisingtides.org/wp-content/uploads/2015/04/ART_Equity_WhitePaper.pdf
- *City of Toronto*: Toronto Public Health Social Impacts of Climate Change; Exploring Health and Social Impacts of Climate Change in Toronto: http://www.toronto.ca/legdocs/mmis/2013/hl/bgrd/backgroundfile-62786.pdf
- *State of California:* Climate Adaptation Guide: Includes a Public Health, Socioeconomic, and Equity Impacts Frame: http://www.adaptationclearinghouse.org/resources/california-climate-adaptation-planning-guide.html
- *USDN*: Equity in Sustainability: A USDN Capacity Building Program: http://www.adaptationclearinghouse.org/resources/equity-in-sustainability-usdn-capacity-building-program.html
- *New River Valley*: New River Valley community engagement strategy: http://public.imaginingamerica.org/blog/article/building-home-dramaturgy-for-theater-as-civic-practice/
- *EPA Citizen Science Program*: Fact Sheet: https://www.epa.gov/sites/production/files/2015-02/documents/citizen-science-fact-sheet.pdf

Endnotes

* This workshop summary report was written by Melissa Deas, institute associate, and Jessica Grannis, adaptation program manager, for the Georgetown Climate Center; and Sara Hoverter, staff attorney, and Jamie DeWeese, climate policy fellow, at the Harrison Institute for Public Law at the Georgetown University Law Center. Editorial and writing support was provided by Georgetown Climate Center colleagues including Vicki Arroyo and Kathryn Zyla, and research and writing support from Georgetown University Law Center student Emily Griffith.

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[4] This simplified spectrum of community engagement is adopted from Sherry Arnstein's (1969) ladder of Citizen Participation Arnstein, Sherry R. "A Ladder of Citizen Participation," JAIP, Vol. 35, No. 4, July 1969, pp. 216-224. Arnstein argues that most community engagement processes do not actually give citizens any real power. Instead, they tend to be contrived processes that allow those in power to get credit for community engagement without actually taking any of the input into account. On the bottom two rungs, Arnstein describes engagement processes that simply aim to educate and convince, but do not actually ask for any real feedback. Above that, citizens are allowed to be heard, but there is no "muscle" to this feedback. In other words, citizen do not have any power to make actual decisions and their advice can easily be overridden. At the top of the ladder are community-driven processes in which citizen are granted the power to grapple with planning questions, devise solutions, and take steps to achieve those solutions with the support of public agencies.

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Appendix A

WORKSHOP AGENDA

Opportunities for Equitable Climate Adaptation

Workshop time, date, and location:

- ***Day 1*** **– April 6, 2016** (8:30 am to 5 pm), Sheraton Inner Harbor Hotel, 300 South Charles Street. Baltimore, MD
- ***Day 2*** **– April 7, 2016** (8:30 am to 2pm), City of Baltimore offices; Front Boardroom, 417 E. Fayette Street, 8th Floor

Overview: The Georgetown Climate Center (GCC) and the Urban Sustainability Directors Network (USDN) are hosting this one-and-a-half day workshop to discuss how communities can address the interconnected challenges of inequality and climate change risks. This workshop will bring together city leaders with environmental justice organizations and state and federal partners to discuss strategies for equitable climate preparedness.

Goals & Objectives: The goal of this workshop is to identify ways that cities can ensure equitable preparedness and adaptation and to develop resources (portals and models) that are accessible and valuable to cities and community-based organizations. The objectives of this workshop are to:

- Identify factors that contribute to communities facing disproportionate risks of climate change impacts.
- Identify examples of equitable climate preparedness planning and resources that provide guidance.
- Help cities engage with diverse stakeholders and transition to a community-driven planning approach.
- Identify gaps in understanding of equitable adaptation planning and policy.
- Identify and discuss options to reduce disproportionate burdens from climate change impacts and ensure that planning and policies adopted in response to climate change do not exacerbate or create inequities; and help participants replicate and scale equitable adaptation policies.
- Inform development of an online equity portal within GCC's Adaptation Clearinghouse to (1) help practitioners identify good examples and resources, and (2) inform research and other activities of GCC and other organizations to continue to help cities advance their work on these issues.

Day 1 – Agenda:

8:30am: **Registration and breakfast**

9:00am: **Welcome, introductions, workshop goals, and description of USDN and GCC projects**

9:30 – 10:30am: **Climate change and disproportionate impacts**
- Short-presentation by equity and social justice partners.
  Structural racism and bias in government that can lead to disproportionate risks and vulnerability
- Group discussion – disproportionate impacts and sources of community resilience

10:30– 10:45am: **Break**

10:45 – 12:15pm: **Equitable adaptation planning and community engagement**
- Short-presentation by cities and social justice partners.
  Strategies and community engagement processes to support equitable adaptation.
- Break-out discussions – equitable planning and meaningful community engagement

12:15– 1:30pm: **Lunchtime panel discussion:** *Equitable adaptation planning by environmental justice partners*

1:30 – 2:00pm: **Opportunities for cities to implement equitable adaptation policies**
- Short presentations:
  - GCC introduction to the range of policies that cities are implementing or considering
  - Cities present adaptation policies they are implementing, how those policies are addressing the root causes of disproportionate climate vulnerability and ensure that the benefits and burdens of the actions are equitably shared, and the successes and obstacles they have encountered

2:00 - 3:00pm: **Break-out discussions - equitable adaptation policies**
1. ***Promoting economic development through resilience*** *(*e.g., local hire, training programs, etc.)

2. ***Avoiding displacement and ensuring affordable, resilient housing*** (e.g., inclusionary zoning, resilient housing construction, anti-displacement, etc.)
3. ***Using open space to promote equity & adaptation*** (e.g., vacant land reuse, green infrastructure, etc.)
4. ***Building social resilience*** (e.g., drawing on local knowledge, neighborhood plans, preparing community members to be first responders, etc.)

3:00 – 3:15pm: **Break**

3:15 – 5:00pm: **Reflections, community of practice, and equity portal**
- Report out – facilitators from break-out discussion report back key lessons from break-out sessions
- Short-presentation – GCC discusses equitable adaptation resources and the climate adaptation portal
- Group discussion – tools and resources to help communities integrate equity in adaptation planning and policies

5:00pm: **Concluding remarks, GCC next steps, tomorrow's agenda, and adjourn**

5:30 – 7:30pm: **Network happy hour** (Tír na nÓg Baltimore: 201 E Pratt St, Baltimore, MD 21202)

Day 2 – Agenda:

8:30 – 9:00am: **Morning Reflection**
- What did we hear yesterday and what resonates?
- What (and who) did we miss?
- What topics/content was missing from the conversation?

9:00 – 11:00am: **Equitable Climate Preparedness Planning Model Development and Design**
- Presentation: existing climate preparedness models
- Discuss what an equitable climate preparedness planning model is:
    - What are existing models that might be valuable to review?
    - What should it include?
    - How can we design it to maximize effectiveness and usefulness?
    - What format should it be if it is an online tool or document?

11:00 – noon: **Evaluation & Pilot Testing**
- Evaluation Framework discussion
- Case study template – discuss information needs while balancing time and effort

Noon – 1:30pm: **Lunch & Pilot Project Sharing**
- Mini-presentations from cities implementing pilots & group brainstorm on each (5 x 10 mins each)

1:30 – 2:00pm: **Next Steps**
- Project schedule
- Involvement of NGO partners
- Ways to continue collaboration and information-sharing throughout the process

Appendix B

USDN urban sustainability directors network

GEORGETOWN CLIMATE CENTER
A Leading Resource for State and Federal Policy

Workshop Participant List:

- Denise Fairchild, President & CEO, Emerald Cities Collaborative
- Felipe Floresca, Vice President, Policy and Government Affairs, Emerald Cities Collaborative
- Aurash Khawarzad, Policy Advocacy Coordinator, WE ACT for Enviornmental Justice
- Jacqui Patterson, Director of the NAACP Environmental and Climate Justice Program, NAACP
- Kimberly Knott Hill, Owner, Future Insight Consulting
- Colette Pichon-Battle, Executive Director, Gulf Coast Center for Law & Policy
- Jared Genova, 100 Resilient Cities Fellow, City of New Orleans
- Tracy Morgenstern, Strategic Advisor, Office of Sustainability, City of Seattle
- Kristin Baja, Climate and Resilience Planner and Floodplain Manager, City of Baltimore
- Matthew Gray, Director, Mayor's Office of Sustainability, City of Cleveland
- Celia VanDerLoop, Environmental Project Manager, City and County of Denver
- Daniel Guilbeault, Chief, Sustainability & Equity Branch, DC Department of Energy and Environment Washington, DC
- Ronda Chapman, Community Engagement & Equity Advisor, DC Department of Energy and Environment, Washington, DC
- Stewart Dutfield, Project Lead – Resilience, City of Toronto
- Eloisa Portillo-Morales, Sustainability Planning Manager, City of San Antonio
- Leah Bamberger, Director of Sustainability, City of Providence
- Mia Goldwasser, Climate Preparedness Program Manager, City of Boston
- Rebecca Kiernan, Senior Resilience Coordinator, City of Pittsburgh
- Michele Moore, Senior Advisor for VP for Disaster Recovery, New York City Housing Authority
- Garrett Fitzgerald, Strategic Partnerships Advisor, Urban Sustainability Directors Network
- Alberto Rodriquez, Environmental and Community Health Programs Manager, Duwamish River Cleanup Coalition
- Miranda Peterson, Research Assistance, Center for American Progress
- Heidi Schillinger, Social Entrepreneur, Equity Matters
- Stuart Clarke, Executive Director, Town Creek Foundation
- Beth Harber, Senior Program Officer, Abell Foundation
- Lynn Heller, Vice President, Abell Foundation
- Sarika Tandon, Program Director, Center for Whole Communities
- Jalonne White Newsome, Senior Program Officer, Environmental Program, Kresge Foundation
- Eric Yurkovich, Senior Associate, Raimi & Associates
- Beth Altshuler, Senior Associate, Raimi & Associates
- Sunaree Marshall, Senior Advisor Office of Economic Resileince, HUD
- Erin Shew, Climate Preparedness Fellow, White House Council on Environmental Quality
- Art von Lehe, Program Specialist, Office of Policy & Program Analysis, FEMA
- Paul Schramm, Health Scientist, Climate and Health Program, CDC
- Carey Whitehead, Deputy Associate Director for Climate Equity, White House Council on Environmental Quality
- The Georgetown Climate Center Team facilitating this event includes: Vicki Arroyo, Executive Director; Kate Zyla, Deputy Director; Jessica Grannis, Adaptation Program Manager; Melissa Deas, Institute Associate; and Sara Hoverter, Senior Fellow and Adjunct Professor, and Jamie DeWeese, Climate Policy Fellow, for Harrison Institute for Public Law at Georgetown University Law Center.

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This workshop summary report was prepared by Melissa Deas with support from Jessica Grannis, Jamie DeWeese, and Sara Hoverter; please contact Melissa Deas (deas@law.georgetown.edu) with any questions or comments about this report.