Centering Equity in Climate Resilience Planning and Action

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Introduction

Communities in the United States and abroad are already feeling the impacts of climate change. In 2021, the U.S. sustained twenty climate disaster events costing $295.9 billion (NOAA, 2022). As the climate crisis worsens, local level action is vital to ensure preparedness and build resilience to meet site-specific conditions. Elected, appointed, and professional staff leaders and other decision-makers at municipal, county, regional, and watershed scales – as well as within community-based organizations and small and medium-sized businesses – are on the frontlines of preparing for and responding to the impacts of a changing climate.

This paper introduces and amplifies principles and best practices for centering equity in climate resilience planning and action. The audience is primarily users of the U.S. Climate Resilience Toolkit and its Steps to Resilience. Climate resilience is the "capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation." (IPCC, 2014).

This paper's focus on equity in climate resilience appropriately emphasizes the final element of the IPCC's definition: **transformation**. Race has often kept historically excluded populations from coming together to understand the interconnections that exist across all forms of marginalization. Government's convening, organizing, and resource mobilization role, in leading with a racial equity framework, can foster unity and strengthen authentic protection of public health, safety and welfare for all. We have an opportunity, now, to transform relationships with one another and with the natural world to strengthen climate resilience and advance sustainable systems.

When historically marginalized communities are centered in climate resilience planning, the outcomes are better for all and more durable. By collaborating in building on existing community strengths, and centering community priorities and needs in climate resilience, practitioners can improve the local economy and strengthen people's ability to participate in the decisions that will directly affect them. Moving beyond technical assistance to adopting an equity centered framework that builds on existing community strengths, knowledge, and assets moves us all forward in achieving more equitable, just and resilient communities.

The analysis, principles, practices, and other resources presented in this paper draw from peer-reviewed scholarly literature as well as – importantly – from gray literature (e.g., county/municipal, nongovernmental organization and think tank reports) in addition to our own research in collaboration with community partners, Eastie Farm and Communities Responding to Extreme Weather (CREW). Our research also included semi-structured interviews with subject matter experts and observation to understand ways to authentically engage with communities in centering equity. Our goal is to highlight and amplify the exemplary contributions to practice from these sources.

Our paper synthesizes guiding principles to apply throughout the planning and action process. These include:

1. Focus on root causes
2. Balance power dynamics
3. Foster a sense of belonging
4. Apply a place-based approach
5. Evolve with the process

We have broadened the common terminology of diversity, equity and inclusion (DEI) to include the critical principles and practices of belonging and justice. Belonging furthers the state of inclusion through deeper equitable relations. Justice addresses past wrongs and facilitates present and future opportunities. In addition, we point to important contributions to the climate resilience equity field from other authors, including White Supremacy Culture (Okun, 2021), Spectrum of Community Engagement (Gonzalez, R., 2020), Jemez Principles for Democratic Organizing (Southwest Network for Environmental and Economic Justice, 1996), and Institutionalizing Representation (Bonta, 2019), and most recently, guidance for city-community collaboration (Gonzalez and Toloui, 2021).

Equity is a frame, a goal, and a process, and as such, it cannot be boiled down to a linear step-by-step recipe. However, we recognize that some elements of planning do have a linear process where certain actions are more successful if followed by others, so we have presented our recommendations in a ten-practice **approach**, recognizing that these actions may be taken in other orders or should be conceived of as a dynamic, continuous spiral process:

1. Community engagement
2. Cross sector collaboration
3. Understand the historical context
4. Equity goal setting
5. Data collection and analysis
6. Assess assets and vulnerabilities
7. Explore hazards
8. Identify and prioritize strategies
9. Implementation
10. Accountability

In addition, we have included a section on "Special Considerations for Specific Groups" to highlight special considerations when working with Black, Latinos, Asian, and Indigenous communities in the United States.

A summary of best practices is a useful way to begin understanding of the subject matter. It does not substitute for lived experience and cannot do justice to a topic as complex as equity. Becoming an equity-focused climate resilience practitioner requires years of open-minded and open-hearted study and immersing oneself in environmental justice communities to understand lived experiences. The ten-practice approach we have outlined in this paper is a simplification of

a nonlinear, circular process based on mutual feedback and evolving relationships. Following a predetermined ten-step process is counter to the process of changing power dynamics, yet that is the structure from which we are working. Climate resilience practitioners can approach this document with the understanding that using this guide may begin a genuine transformation in approaching climate resilience, adaptation and mitigation efforts in collaboration with communities.

Why Equity in Climate Resilience Planning and Action?

Climate change affects everyone, but its impacts are not experienced equally across populations. Black, indigenous, people of color (BIPOC), low-income, elderly, and other historically marginalized communities are more vulnerable to flooding, extreme heat, sea-level rise, and other hazards of a changing climate. Historically, planning and development have centered the needs of White communities and relegated marginalized communities to areas that are more exposed to pollution and environmental hazards (Taylor, 2016). Systemic racism, from housing discrimination to exclusionary participatory processes, has led to inequity in many communities in terms of climate resilience. As a result, those who contribute the least to climate change are most often in harm's way.

Consider these research findings that highlight inequity, specifically for Black Americans, who:

- Constitute 13.4% of the U.S. population (US Census Bureau, 2020) and contribute 23% less of the greenhouse gasses that contribute to climate change compared with other racial groups, but bear 21% more of the harms (Hoerner & Robinson, 2008).
- In urban areas, are more likely to live in places with dangerously hot temperatures (above 105 degrees Fahrenheit) and are twice as likely to die from dangerous heat compared with other groups (Morello-Frosch et al., 2009).
- Experience the most economic damage from natural disasters, losing on average $50,000 per household in the aftermath of a natural disaster while White households gain $75,000 (Beeman et al., 2021).

Equity in climate resilience planning and action is imperative in order to correct for past inequities and create communities that are safe and healthy for all. Centering equity also recognizes the power of the knowledge, networks, skills and other strengths and assets found in every community.

Interventions to enhance climate adaptation have usually emphasized technocratic approaches while relegating social and equity concerns to the sidelines. Climate adaptation plans of major cities around the United States devote substantial space to potential hazard exposure, risk scenarios according to different emissions trajectories and timeframes, and catalogs of options for retrofitting housing, promoting public transit, and other technological interventions (Chu & Cannon, 2021). When it comes to implementation, affluent communities take advantage of environmental and green building/energy incentive programs while lower-income, under-

resourced communities face barriers such as: a) lack of access to timely information, b) insufficient up-front capital/resources, c) inadequate programs designed to address inequities, d) lack of trust or capacity, and e) overly complicated processes (NAACP, 2021). These cases are far too common to be written off as bad examples in an overall progressive movement; inequity is at the root of most community planning and development.

Systemic racism and existing inequities in community planning and development have led to a host of ills plaguing not only marginalized communities but the health and well-being of society overall. Many BIPOC, low income, and marginalized people are forced to live in hazardous and high-risk locations, be exposed to more pollution, and have less ownership and security in their housing situation. This means that they are more likely to develop health problems, have difficulty attaining educational and economic goals, and be less able to participate in community processes that could improve their situation or prevent them from becoming worse. These disadvantages can be compounded by other marginalized identities such as gender, sexual orientation, disability, age, race and ethnicity to make residents more susceptible to climate change impacts (Shi et al., 2016).

In addition to correcting historical injustices, the benefits of centering equity in climate resilience include:

- **Collective Action.** Government action cannot address climate change alone. We need all communities to be able to take an active role in reducing carbon emissions and building resilience to a changing climate, but not all communities are positioned equally to do so. By addressing inequity in the systems we manage and influence, we create opportunity for more communities to participate actively in climate solutions and for everyone to benefit (Kapwa Consulting, 2020).

- **Resilient Design.** Equity as a design process requires considerations of unintended negative outcomes on communities that are already marginalized. By addressing their needs and concerns, and shifting processes to increase their influence, solutions can enhance the overall beneficial impact of climate initiatives (Kapwa Consulting, 2020).

- **Fiscal Responsibility.** Government has the duty to use public dollars responsibly. Data shows us that in major cities throughout America, people of color and low-income populations fare worse across life indicators (health, housing, economic prosperity, education, etc.). As a performance metric, this is an indicator that something is not working well. This further increases the long-term social tax burden of everyone. Addressing the systemic issues underlying both climate and social inequities is fiscally responsible management of public resources (Kapwa Consulting, 2020).

- **Regulatory Responsibility.** Many of the social and climate challenges we face today can be traced to the regulatory decisions of government. Using the tools of regulation and policy can be a corrective mechanism to shift the impact of past decisions on communities vulnerable to climate change. (Kapwa Consulting, 2020).

- **Justice.** Those who contribute the least to climate change experience more of the harms. Centering equity in climate resilience planning and action facilitates the redress of past injustices and the possibility of present and future opportunities.

The bottom line is that unless equity is intentionally prioritized from the beginning and facilitated through processes and regulations that hold projects accountable, climate adaptation and resilience planning are likely to default to existing patterns of inequitable and exclusionary practices (NAACP, 2021).

Transformational changes are beginning, and we hope that this paper contributes to accelerating BEJDI dynamics and outcomes. Large cities in the U.S., which tend to be places where people of color and large inequities are concentrated, are increasingly recognizing the importance of equity to climate resilience. Our review of the literature surfaced a number of recent climate resilience plans in which equity plays a large role. We highlight these plans in this paper's section of Case Studies (See Appendix A). These recent initiatives demonstrate leadership in developing equity-based roadmaps to resilience. However, these approaches are still relatively new, with much to improve on. They are also far from being mainstream in the field of climate resilience and sustainability. Our intention is that this guide will contribute to popularizing this approach and provide a starting point for implementing best practices to centering equity in climate resilience.

Why Does Equity Lead with Race?

Climate change is the result of centuries of the colonial exploitation of people and nature, continuing today through patterns of unequal power dynamics most visible along racial lines (Daszkiewicz et. al., 2022). Systemic inequity burdens those who are marginalized because of their race, ethnicity, gender, sexual orientation, ability, income, class, and age, among other characteristics. In the United States, **race continues to be the greatest predictor in all indicators of progress and well-being**. The Pew Center reports that the median wealth of White households is 20 times that of Black American households and 18 times that of Hispanic households (Kochhar, & Cilluffo, 2017). This gap exists regardless of education level — the median wealth of Black American families in which the head of household graduated from college is less than the median wealth of White families whose head of household dropped out of high school (Gill et al., 2017). When people are economically disadvantaged, they have less resources to cope with hurricanes, floods, fires, and other climate disasters.

People disadvantaged by race and income/wealth are more likely to be living in areas prone to climate disasters. More than 72% of Black Americans live in counties that violate federal air pollution standards, compared with 58% of Whites (Lyon & Madrid, 2011). In one study, Black Americans were found to be exposed to 38 percent higher levels of nitrogen oxide (NO2) outdoor air pollution compared with White Americans (Clark, Millet, & Marshall, 2014). In addition, more than 70% of Black Americans live in the American South or the Midwest, regions that are expected to experience an increase in extreme precipitation and flood events as climate change worsens (Beeman et al., 2021).

By prioritizing race in climate resilience, governments and climate resilience practitioners can address the root causes of inequity, while also addressing factors such as income/wealth, gender, and disability that worsen racial inequity. Leading with race does not mean only race, but it is a way of taking into account the profound impact that racism (including slavery, Native American genocide, and racial exclusion) has had on every aspect of U.S. society (Kapwa Consulting, 2020).

As a social construct, race itself is often too general a system to categorize differences among people of color, and ethnicity may be a more relevant factor. For example, in Newark, New Jersey, the West African and West Indian immigrant populations face very different challenges from native Black Americans (Gill et al., 2017), even though all are Black. Immigrants may not have proficiency with English, do not know how to navigate American institutions and bureaucracy, or are unaccustomed to racism in the U.S. Asian populations also encompass a vast array of nationalities and cultures with different needs and assets. **Disaggregating ethnicity from race is often essential to understanding equity and resilience in communities**.

Black, indigenous, people of color (BIPOC), low-income, elderly, LGBTQ individuals often experience intersectional injustices of racism, sexism, ableism, ageism, and other oppressions that have rendered them more exposed to climate hazards and possessing less of the resources to deal with climate disasters. As people of color are poised to become the majority of the U.S. population by 2045 (Frey, 2018), climate resilience planning that centers the needs of frontline communities is not only justice, but also the best way to prepare communities to be climate resilient overall.

Terminology and Concepts

What do we mean by equity in climate resilience planning and action? What do we mean by justice, belonging, diversity, and inclusion? In this section, we discuss the terms that represent the goals to which all community engagement should strive.

We use the acronym BEJDI for simplicity because we consider belonging, equity, and justice as the three most important principles and practices to focus on for climate resilience. Diversity and inclusion follow BEJ because they are outcomes of processes that center belonging, equity, and justice. Diversity, in the form of representation from people of color without belonging and inclusion, is tokenism. However, inclusion and belonging without diversity is an indication that equity and justice have not been fully integrated. Equity means that one is not only inclusive and open to everyone's participation but also that one acknowledges the deficits of the past and is proactively addressing past wrongs for historically marginalized people, while proactively facilitating opportunities in the present and future. Equity means diversity AND inclusion, not one or the other. We note here that we do not use the popular acronym JEDI recognizing the critique about the term's problematic associations with the *Star Wars* franchise (Hammond et al., 2021).
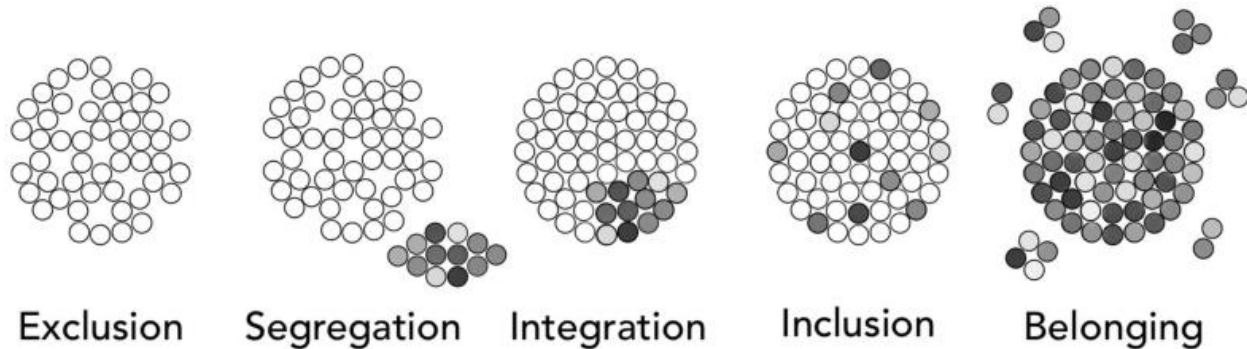
Belonging

In the social justice lexicon, diversity, equity, and inclusion (DEI) are the terms most frequently employed, with inclusion considered the end goal of how members of a community engage with one another. Yet inclusion is problematic in that it implies the presence of an in-group and an out-group. The dominant group is the in-group to which marginalized groups are integrated and perhaps expected to conform in order to take part. Belonging goes farther along the spectrum towards equity and meaningful participation. What does that mean and how can it be understood?

Figure 1 (Carter, 2021) is an illustration of the spectrum of relating within a community from "exclusion" to "belonging." In the first circle from the left, "exclusion" is represented as a homogenous conglomeration of individual white balls. In "segregation," a small group of colored balls appear next to the conglomeration of white balls, indicating that the marginalized group is segregated from the mainstream group. Progressing to "integration," the collection of colored balls is integrated into the conglomeration of white balls, but they remain a distinct group in the community. Farther along in "inclusion," the colored balls are dispersed throughout the community, indicating a more embedded presence, though the colored balls remain distinct. Finally, "belonging" is indicated by a state in which all the balls are colored, which doesn't mean that there are no White individuals, but that everyone is recognized as a unique individual and there is no distinction of an in-group or an out-group. In addition, differences among celebrated, smaller congregations of individuals appear alongside the main group, conveying that in belonging, multiple communities can exist in relation to each other without all of them being integrated into one main community. As our understanding of equity in community relations

advances, we may discover stages beyond belonging that manifests equity even more profoundly.

Figure 1
Five Representations of Community

(Carter, 2021)

We argue that climate resilience approaches must be grounded in goals of creating not only justice but also – and perhaps even more importantly – a sense of belonging among community members. Carter (2021) characterizes key elements of what it means to feel a sense of belonging: being present, invited, welcomed, known, accepted, supported, heard, befriended, needed, loved. These elements connect with the higher levels and stances toward community described in NAACP (2021) and González et al. (2021a, 2021b). We explore their meaning here, adapted and, in some cases, as noted, directly excerpted from Carter (2021):

Present: The physical or virtual presence of someone taking up equal space as everyone else in a community. It is hard to feel belonging if you are not allowed to be present.

Invited: Personalized outreach indicating that a person's presence is actually desired. "Invitations also communicate something important about the value of a person from the perspective of the community. They assure people that they are wanted and perhaps even needed. This shift from passively awaiting someone's potential arrival to actively pursuing their presence can be influential in fostering a sense of belonging. A person's presence does not catch the community by surprise when actively sought out." (Carter, 2021)

Welcomed: "The response of the community to one's presence is one of delight, friendliness, courtesy, and authenticity." Phrases like "welcomed without condition," "warmly embraced," "treated like family," or "feeling at home" are used by individuals who feel welcomed (Carter et al., 2016a).

Known: Feeling like others want to get to know you as a whole person and remember what they've learned about you. "To be noticed, recognized, and acknowledged by others are each important aspects of belonging" (Schnorr, 1990; van Alphen et al., 2009). To be known marks the transition from stranger to acquaintance.

Accepted: Feeling like others are ok with your identity, background, strengths, weakness, and flaws. Acceptance is quite different from tolerance in that there is no judgment about who you are and you can be who you are without fear of being judged or excluded.

Supported: Feeling like help is provided when asked, needs are inquired after and met. Being allowed to contribute in a way that matches one's talents and interests.

Heard: "To be heard, to have a seat at the table, to be listened to, to be acknowledged, to be asked what you think, or to have an influence—all communicate to people that their involvement and insights matter. Such phrases reflect the shift from being present to having a presence— from silence to salience. Being part of a community in which others seek out your input can be empowering and suggests that your presence makes a real difference."

Befriended: "Belonging is experienced best through relationships. People thrive most when in the company of others who know, need, and care about them. Having someone to talk with, walk with, cheer with, cry with, lunch with, lounge with, pray with, or play with can be a powerful antidote to loneliness and isolation." Friendship is chosen freely and cannot be obligated or demanded. "Friendships are more likely to emerge when people participate in shared activities over time with others with whom they have shared connection."

Needed: "People know they belong when they are needed by others. When talents, gifts, abilities, and contributions are recognized and received by a community, people feel valued. This shift from recipient to contributor brings a sense of significance and importance. Others in the community come to see you as integral, perhaps even as indispensable."

Loved: "Healthy communities are marked by love and wholehearted care for one another. This love can take many different forms—an affectionate regard, a deep concern, or an unconditional commitment. People tend to go to great lengths for those whom they love—they make allowances, they go the extra mile, they extend grace, they sacrifice their own interests, they avoid what is expedient, they work for another's good, and they offer forgiveness. Moreover, love leads people to care about someone's flourishing throughout all 7 days of the week—after school dismisses, outside of the workday, and beyond the benediction. When people talk about the communities that matter most to them, they often talk about the love they encounter there (Carter et al., 2016a; Strnadová et al., 2018). Where love abounds, belonging is much more likely to be experienced." (Carter, 2021)

Equity

Equity in climate resilience means that one's race, class, ability or other characteristic is not a determinant in how well one is equipped to deal with climate change. Equity is defined as the equal and fair distribution of opportunities, resources, and environments free from climate hazards and risks regardless of individual/group identity or background (Chu & Cannon, 2021). Equity and equality are not the same thing. Equality is treating everyone the same, while equity

is ensuring everyone has what they need to be successful. While equality aims to promote fairness, it can only work if everyone starts from the same place and has the same needs and goals (Kapwa Consulting, 2020).

Equity is both a state of being and a process. The four different forms of equity are:

A. Procedural equity: Ensuring that processes are fair and inclusive in the development and implementation of any program or policy.

B. Distributional equity: Ensuring the resources or benefits and burdens of a policy or program are distributed fairly, prioritizing those with highest need first.

C. Structural (intergenerational) equity: A commitment and action to correct past harms and prevent future negative consequences by institutionalizing accountability and decision-making structures that aim to sustain positive outcomes.

A fourth aspect is overarching and integrates with the previous three:

D. Cultural equity: A commitment to undoing racism and anti-blackness through an intentional deconstruction of White supremacist assumptions and behaviors and the concurrent construction of equitable multicultural norms

(Kapwa Consulting, 2020)

Because equity leads with race, racial equity is the condition where one's race identity has no influence on how one fares in society. Racial equity is one part of racial justice and must be addressed at the root causes and not just the manifestations. This includes the elimination of policies, practices, attitudes, and cultural messages that reinforce differential outcomes by race (US Climate Action Network, 2021). An important component of racial equity is economic equity: a condition when all persons, including economically disadvantaged people and communities, have "full and fair" access to jobs, opportunities, services, housing, and public transportation (Yen Liu & Keleher, 2009 in Hughes et al., 2021).

Justice

Racial Justice refers to the work of dismantling systems that have historically oppressed marginalized persons. It is the "proactive reinforcement of policies, practices, attitudes and actions that produce equitable power, access, opportunities, treatment, impacts and outcomes for all" (ICMA, 2021 as cited in Hughes et al., 2021). Racial justice leads to the actualization of racial equity (Hughes et al., 2021).

Social Justice is embracing a vision of society in which the distribution of resources and access to decision-making is equitable and all members are physically and psychologically safe and secure. Social justice involves social actors who have a sense of their own agency as well

as a sense of social responsibility toward and with others and the society as a whole (Adams, Bell, & Griffin, 1997).

Diversity

Diversity refers to psychological, physical, and social differences that occur among any and all individuals; including but not limited to race, ethnicity, nationality, religion, socioeconomic status, education, marital status, language, age, gender, sexual orientation, mental or physical ability, and learning styles (USCAN, 2021). Efforts to increase diversity usually focus on the selection, promotion, and retention of people of diverse backgrounds.

While diversity in representation is an important marker of equity, diversity itself is no indication of belonging, inclusion, equity, or social justice. The mere existence of difference does not mean the equitable treatment of all individuals, nor does it mean an inclusive culture that values social justice. Without measures to move the entire institution towards equity, belonging, and justice, people of color in predominantly White organizations will continue to feel marginalized and tokenized.

Inclusion

Inclusion is the act of creating environments in which any individual or group can be and feel welcomed, respected, supported, and valued to fully participate where differences are embraced. An inclusive and welcoming climate of the organization embraces differences and offers respect in words and actions for all people (UC Berkeley, 2009).

Researchers at the University of Massachusetts Medical School identified eight factors that create inclusion in a group context:
1. Common purpose
2. Trust
3. Appreciation of individual attributes
4. Sense of belonging
5. Access to opportunity
6. Equitable reward and recognition
7. Cultural competence of the institution
8. Respect

The inclusion of these eight factors enables individuals to experience:
1. Access to information and social support
2. Acquisition of or influence in shaping accepted norms and behavior
3. Security within an identity group or in a position within an organization
4. Access to and ability to exercise formal and informal power

(Jordan 2009 in Plummer, 2018, p. 26)

Within this framework, individuals are empowered to express their full potential within the organization and contribute to better their own circumstances and those of the group. Without these factors of inclusion, individuals are apt to feel left out, unvalued, and burned out, driving them to leave the organization.

The following table presents equity, inclusion, and justice in indicators for climate adaptation (Chu & Cannon, 2021):

Criteria	Definition	Indicators for climate adaptation
Equity	Equal and fair distribution of opportunities, resources, and environments free from climate hazards and risks regardless of individual/group identity of background.	Plans identify adaptation needs for low-income and socially vulnerable communities. Interventions focus on targeted enhancement of economic opportunities, access to safe and green living environments, and provisions of adequate public facilities in case of extreme climate events.
Inclusion	Degree to which decision-making processes and procedures are transparent, accountable, and include diverse voices, values, and viewpoints.	Processes are broadly participatory and representative of diverse interests. Strategies can range from basic outreach tools (such as public presentations or digital platforms), inquiry-based methods (such as residential surveys, questionnaires, and stakeholder interviews), to elaborated co-creative arenas (such as public interactive workshops and formation of community liaison committees).
Justice	Recognition that minority groups are structurally vulnerable and intergenerationally disadvantaged in terms of their cultural, political, and socioeconomic rights.	Adaptation goals recognize and strive to rectify systemic and entrenched inequalities attributed to discrimination based on race, ethnicity, gender, ability and sexuality. Plans include combating injustice through anti-racist (such as racial healing or reconciliation), gender transformative, or socioeconomically empowering strategies.

Other Terms

Climate Change Adaptation is the adjustment to current climate conditions or expected climate changes and their impacts (Hughes et al., 2021).

Climate Resilience Practitioners: A practitioner is someone who practices a profession. A climate practitioner can encompass many different roles. The Practitioner Guide currently

focuses on climate service practitioners, who are professionals who work with communities on implementing the Steps to Resilience in the Climate Resilience Toolkit (Practitioner's Guide v1.1 pg. 16). We recommend expanding the definition of climate practitioners to include additional roles working at the intersection of BEJDI and climate resilience.

To integrate an equity lens and framework into climate resilience work requires a community-driven approach where residents of vulnerable and impacted communities define for themselves the climate challenges they face, and the climate solutions that will benefit their communities directly and indirectly. With this type of approach, *the climate practitioner becomes more a facilitator and co-learner* throughout the various steps of community climate resilience. The climate practitioner who takes on the role of facilitating the process must incorporate and acknowledge community members and other community leaders and advocates as on-the-ground experts. Skills of community organizing will also be important.

Community Based Organizations (CBOs): These organizations are trusted public or private, usually non-profit, resource entities that provide specific services to the community or targeted population within the community based on a level of trust, awareness and connection to the people. CBOs can include aging and disability networks, community health centers, childcare providers, home visiting programs, state domestic violence coalitions and local domestic violence shelters and programs, Adult protective services programs, homeless services providers, and food banks that work to address the health and social needs of populations (U.S. Department of Health and Human Services).

Frontline Communities: Frontline communities are groups of people who are directly affected by climate change and inequity in society at higher rates than people who have more power in society. They are "on the frontlines'' of the problem. For example, people of color, people who are low income, who have disabilities, who are children or elderly, who are LGBTQIA, who identify as women, etc. have fewer advantages and access to resources in our society than other people. In the context of climate change, frontline communities' health, income, and access to resources are less than people who have the social privilege (people who are White, upper-middle-class or upper-class, able-bodied, in middle age ranges, heterosexual, non-trans, etc.). In other words, people who experience oppression because of race, income, gender, sexual orientation, disability, gender identity, age, etc. are more likely to have fewer resources and protections in our society in general and even less access to resources and protections not only to adapt to our changing climate but also to pass policies and legislation that are fair and culturally significant (NAACP, 2021).

Targeted Universalism involves setting universal goals, assessing how population subgroups fare relative to the goals, and addressing barriers, structural impediments, and resource deficiencies in a targeted manner in order for all groups to meet goals (Michigan Department of Civil Rights and Gerald R. Ford School of Public Policy, 2018).

Tokenism: A concept which addresses the prospect of having superficially diverse representation in terms of demographic and ability without the substantial drive to make the intended diversity work as intended (Lawal & Nuhu 2021).

Vulnerability: The degree to which a person or community is at risk, risk being the likelihood of a threat and impact. Impact is determined by the nature and magnitude of the exposure, sensitivity to the exposure, and the capacity of an individual or community to adapt and respond (Rudolph et al., 2018).

White Supremacy Culture: Characteristics of White supremacy that manifest in organizational culture, and are used as norms and standards without being proactively named or chosen by the full group. The characteristics are damaging to both people of color and White people in that they elevate the values, preferences, and experiences of one racial group above all others. Organizations that are led by people of color or have a majority of people of color can also demonstrate characteristics of White supremacy culture. Jones and Okun identified twelve characteristics of White supremacy culture in organizations: 1) perfectionism, 2) sense of urgency, 3) defensiveness, 4) quantity over quality, 5) worship of the written word, 6) paternalism, 7) power hoarding, 8) fear of open conflict, 9) individualism, 10) progress is bigger/more, 11) objectivity, and 12) right to comfort (Okun, 2021).

Guiding Principles

Centering equity in climate resilience planning and action is an interactive iterative process that begins with the examination of history and power. A climate resilience practitioner may look to the following guiding principles as the first step toward shifting power and meaningfully planning for climate equity. These principles were adapted from *Community Drive Climate Resilience Planning: A Framework* (Gonzalez et al., 2021b), augmented by our research with Eastie Farm and CREW, and supported by our literature review. These principles and the concepts of belonging, equity, justice, diversity, and inclusion should inform the entire process before it begins and throughout.

Principle 1: Focus on Root Causes

The climate crisis is a complex and intersectional challenge rooted in the oppression and exploitation of people and nature. While the technical explanation of the cause of climate change is the over-emitting of greenhouse gasses as a result of human activity, it does not explain how and why this came about. The root causes of climate change include: a) treating nature as a resource to be exploited for human benefit without consideration of long-term consequences for ecosystems or other beings (Holleman, 2017); b) the exploitation of the global South for the benefit of the global North (Joshi, 2021); c) the creation of sacrifice zones where entire regions, peoples, and cultures are sacrificed for the benefit of supposedly superior populations (Gonzalez, C., 2020); and d) disregard for future generations in favor of present generations (Weiss, 2008). Climate change is rooted in unequal and unjust relations for the sake of profit, which is also the root cause of racism, patriarchy, environmental destruction, and other injustices. It is manifest in every area of human enterprise, from the economy, to government, to individual relations (Gonzalez, C., 2020; Holleman, 2017; Joshi, 2021).

The solutions to the climate crisis must be focused on addressing root causes and require whole systems thinking. This type of systems thinking calls for a holistic view of the challenges we face and solutions at the intersection of people, the environment, and the economy. Practitioners/facilitators must seek to understand the underlying causes of community vulnerability that have led to generational hardship and decreased adaptive capacity and resilience. This involves identifying policies, institutions, and cultural norms that have harmed BIPOC communities and that perpetuate inequities in climate resilience. Countering these systemic injustices requires centering belonging, equity, and justice in the solutions and the process of arriving at them. It also involves honoring community assets in addition to recognizing vulnerabilities. When we identify and address the root causes of the problem, we begin the process of dismantling existing systems of power imbalance.

Principle 2: Balance Power Dynamics

Climate resilience is not just about using resources sustainably; it is also about recognizing the imbalance of power that negatively impacts vulnerable communities. Traditional planning methods have typically consisted of a top-down approach where developers develop a plan and

community members are sometimes invited to comment at the end or at strategic milestones. In the most egregious cases, communities of color have been demolished or reconstructed without their consent or compensation for their losses. The opposite of that, community co-design, is a participatory approach where community members are treated as equal collaborators in the initiating, planning, action, and evaluation process. It empowers those who are most impacted by planning and design decisions to be authentically and deeply involved in the determining of outcomes. The climate resilience practitioner serves as a facilitator for the stakeholders, who have equal power in the planning process.

> The work of community-driven resilience planning is really the work that needs to be centered in climate adaptation approaches. *(Jacqueline Patterson, founder and executive director at The Chisholm Legacy Project, 2022).*

A community co-design process increases awareness of systems of oppression and cultures of exclusion that contribute to climate vulnerability. This can help build new alliances that increase the capacity of historically marginalized communities to influence decision-makers and drive change. Institutions and policies need to be created and supported to finance local solutions in ways that continue to build on and increase community assets. To assist with community co-design, the Spectrum of Community Engagement, Jemez Principles of Democratic Organizing and White Supremacy Culture explained later in this section provide guidance on interaction among stakeholders.

Principle 3: Foster a Sense of Belonging

Balancing power dynamics requires reimagining our relationships with one another. Instead of relationships of exclusion and oppression, we practice relationships of inclusion and belonging. As discussed earlier, the key elements of what it means to feel a sense of belonging are: present, invited, welcomed, known, accepted, supported, heard, befriended, needed, and loved (Carter, 2021). Dr. Erik Carter expresses what belonging feels like in this manner:

> I think it means fundamentally we come to see each other in different ways. Not as the ins and the outs, not as the members and the strangers, the labelers and the ones who are labeled, but as a single community, diverse, each of inestimable worth, but equal. Or on another level, I think it means we do much more than just share space, we actually share lives. We enter into relationships with one another. We're not just co-located but we remain involved in each other's lives the other six days of the week after the [convening]. There's an important difference between inclusion and belonging. It's the difference between being present and having a real presence. It's the difference between making room for someone when they arrive and missing them when they fail to arrive. It's the difference between welcoming someone's presence and actually aching for their absence. (Carter, 2019)

In the context of climate resilience, this principle requires the climate resilience practitioner to work toward understanding systemic oppressions in the community and developing cultural competence of the community they are working within. Before any planning commences,

partners need to engage in building trust, establishing communication agreements, and taking the time to get to know one another. This may require acknowledging past and present harms perpetuated by partners in power and working towards healing and reconciliation. Throughout the process, community partners need to be treated as equal stakeholders and friends, not just welcomed to the table, but supported to be there every step of the way, including with money, data, accommodations, and other resources.

Principle 4: Apply a Place-Based Approach

Actions to increase community resilience must be nested in the cultural values of the community and take into account lived experiences of the residents. In a place-based systems approach, the local community is viewed as the primary source of knowledge. It is in the community where you can observe ecosystem processes in action along with human relationships and culture. Place-based climate engagement should provide opportunities for meaningful dialogue in a specific place, where climate resilience practitioners, community members, and other stakeholders interact with one another to collaboratively uncover - or bolster existing strategies of climate resilience in their community. Community members are involved in every step of the process, from setting goals, to identifying hazards, vulnerabilities, and assets, identifying and prioritizing strategies in an iterative process that honors learning and accommodates different competencies. The community is also prioritized as a resource for implementation and accountability of maintaining equity in the realization of the codeveloped vision.

> Iterative community conversations are essential. Adaptation planning starts with accepting that the community knows what it needs and wants. Implementation starts with the community vision while incorporating the work of healing justice. The community will identify what's traditionally on the linear list of adaptation planning, in addition to specific assets and hazards found within the community. *(Jacqueline Patterson, founder and executive director at The Chisholm Legacy Project, 2022).*

Community resilience at the local level is situated within and influenced by national-level policy and actions. The National Preparedness Goal is to create "a secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk" (FEMA, 2011). The 2011 Presidential Policy Directive/PPD-8: National Preparedness directed the Secretary of the Department of Homeland Security to develop a national preparedness goal in which all U.S. citizens and organizations shared responsibility (White House, 2011). This new directive has downscaled the focus on local and individual preparedness leadership and action, making inclusive community-level resilience initiatives even more important.

More than 90 percent of U.S. municipalities are modestly sized and resourced, with populations fewer than 25,000 people (Abrash Walton et al., 2016). Adaptation at this local level is critical. Local governments play a key role in allocating limited local resources to address the complex challenge of climate change impacts (NRC, 2010). Both "bottom up" community planning and "top down" national strategies may help regions deal with impacts such as increases in electrical brownouts, heat stress, floods, and wildfires. Such a mix of approaches will require cross-

boundary coordination at multiple levels as operational agencies integrate adaptation planning into their programs. (Melillo et al. 2014, p. 671-672). Acting in isolation at the local scale can reduce the effectiveness of adaptive responses or lead to maladaptation. Cross-jurisdictional, cross-functional, cross-cultural collaboration is key.

Principle 5: Evolve with the Process

If we approach climate resilience planning and action as a joint effort towards a mutually desirable outcome, then the process should be an evolving relationship among equal partners. A common pitfall of community-driven planning is that the process is often viewed in linear steps to a predetermined objective, which is subjected to minor revisions upon community review or forced upon the community regardless of their opinions. To engage a metaphor, one does not present a potential life partner with a five-year plan of dating, engagement, marriage, and children on the first date and expect them to accept it with minor revisions, at least not in a context where partners are considered equals. Rather, the process involves an invitation to engage in a relationship, exploring needs and wants, and where both partners have the opportunity to revise their views or withdraw at any point. Continued engagement is contingent upon respect and mutual consent from both parties. The goals and the process are fluid and adaptable in accordance with the evolution of the relationship.

> A common mistake is creating a plan for the sake of creating a plan, which perpetuates the planning cycle…."We press a timeline, replicate the same issues, and perpetuate inequality. We're continuing to make people more vulnerable by doing this process. *(Kristin Baja, Director of Support & Innovation, Urban Sustainability Directors Network, 2022).*

A community plan is useless without community buy-in. In addition, many planning efforts stall before implementation due to lack of resources and political will. The entire process of integrating equity into a climate resilience approach must be viewed as a circular iterative process that continues beyond implementation. Climate resilience practitioners must view all of the steps to resilience referenced in the U.S. Climate Resilience Toolkit as a long-term process that builds lasting relationships with the community and existing decision makers. This process should bridge the divide between the community and government resulting in authentic community empowerment.

Engaging in an equitable approach to climate adaptation planning may result in the implementation of strategies and the production of deliverables that deviate from the original vision. This deviation from an original plan can be jarring, especially as community members and partner organizations utilize their unique and local strengths which may be unfamiliar to climate resilience practitioners. By practicing equity in process, a climate action or adaptation plan may not be the most appropriate course of action for a climate adaptation process. Correct and appropriate deliverables will be created from the equitable process.

After much research by the Social Equity Task Force of the American Planning Association (APA), it was found that implementation of **effective change is more dependent on the**

capacity and skills of practitioners rather than the tools to which practitioners have access.

Spectrum of Community Engagement

Community engagement needs to go beyond tokenism and superficial invitations towards "invented" spaces of citizenship where residents create their own opportunities and terms of engagement (Cornwall, 2002 in Amorim-Maia, 2021). Under this model, local communities (represented by community-based organizations and social movements) manage their resources and take charge of the direction of change (Olazabal et al., 2021 in Amorim-Maia, 2021). Participation is aided by access to climate, population, and geographic data in an exchange of information and knowledge facilitated by climate resilience practitioners. Engaging local organizations in the planning and implementation of their climate adaptation plan promotes the creation of new skills, jobs, businesses, and interpersonal relationships that vitalize all indicators of community progress and well-being (Amorim-Maia, 2021).

Avoiding tokenism means not engaging in symbolic gestures that merely give the appearance of inclusion rather than authentic engagement. An example is when BIPOC community members are called on at the final step of the planning process when it is too late for meaningful public feedback. Neither should communities of color be singled out to carry the entire labor of adaptation processes. To this end, co-ownership of decisions is an effective goal while building relationship through mutual communication with facilitating agencies who can connect resources to needs without driving the focus of these needs (Hughes et al., 2021).

Community engagement should be driven by the intention of creating belonging. A rigorous process of community engagement involves "community members helping to define the problem, assess the community's needs, imagine and propose potential solutions, meet with elected officials, carry out or oversee an equity impact assessment of potential policy/project options, organize additional community engagement activities, and implement the solution" (NAACP, 2021).

Making the shift to belonging, delegated power, and community ownership means **we need to shift mindsets from a sense of urgency and efficiency to "things take longer than anyone expects."** A sense of urgency is a characteristic of White supremacy and power/profit-driven culture that makes it difficult to take time to be inclusive and encouraging of democratic and/or thoughtful decision-making. Stakeholders should set goals of inclusivity and diversity, allocating plenty of time for discussion, write realistic funding proposals with realistic time frames, and be clear about how decisions will be made (NAACP, 2021).

Figure 2 shows the spectrum of engagement from "ignore" to "defer to." The NAACP calls for all projects to strive for level 5 in terms of community engagement and achieve at minimum level 3 in the planning process (NAACP, 2021 "Centering Equity in the Sustainable Building Sector Initiative")

Figure 2. *Spectrum of Community Engagement* (Gonzalez, R., 2020)

Stance Towards Community	Ignore: 0	Inform: 1	Consult: 2	Involve: 3	Collaborate: 4	Defer To: 5
Impact	Marginalization	Placation	Tokenization	Voice	Delegated Power	Community Ownership
Community Engagement Goals	Deny access to decision-making processes	Provide the community with relevant information	Gather input from the community	Ensure community needs and assets are integrated into process & inform planning	Ensure community capacity to play a leadership role in implementation of decisions	Foster democratic participation and equity through community-driven decision making; bridge divide between community and governance
Message to Community	Your voice, needs and interests do not matter	We will keep you informed	We care what you think	You are making us think, (and therefore act) differently about the issue	Your leadership and expertise are critical to how we address the issue	It's time to unlock collective power and capacity for transformative solutions
Activities	Closed door meetings, misinformation, systematic	Fact sheets, open houses, presentations, billboards, videos	Public comment, focus groups, community forums, surveys	Community organizing and advocacy, house meetings, interactive workshops, polling, community forums	MOU's with community-based organizations, community organizing, citizen advisory committees, open planning forums with citizen polling	Community-driven planning, consensus building, participatory action research, participatory budgeting, cooperatives
Resource Allocation Ratios	100% systems admin	70-90% systems admin 10-30% Promotions and publicity	60-80% systems admin 20-40% consultation activities	50-60% Systems Admin 40-50% community involvement	20-50% Systems Admin 50-70% Community Partners	80-100% Community partners and community-driver processes ideally generate new value and resources that can be invested in solutions

Jemez Principles for Democratic Organizing

Authentic collaboration with community partners is central to equity in climate adaptation and resilience planning, but working with multiple stakeholders – each used to different degrees of power – presents many challenges. It is easy for a group to default to habits of White supremacy culture and marginalization of women, BIPOC, and other underrepresented communities. The Jemez Principles, developed by participants of the 1996 Working Group Meeting on Globalization and Trade, outlines a set of principles to help build common understanding between people of different cultures, politics, and organizations for working together. The Jemez Principles have since become a common set of rules adopted by working groups and collaborations interested in cross-cultural, democratic organizing. The Jemez Principles are presented in Appendix D.

White Supremacy Culture

Culture is an implicit set of rules and norms often invisible to those who practice it, because it is often accepted as "the way things are done." White Supremacy Culture is a cultural legacy that continues to perpetuate harm on those outside of the dominant culture by normalizing ways of working and relating that are anti-democratic, capitalist, racist, and patriarchal. Okun states that "White supremacy culture is the widespread ideology baked into the beliefs, values, norms, and standards of our groups (many if not most of them), our communities, our towns, our states, our nation, teaching us both overtly and covertly that whiteness holds value, whiteness is value" (2021). Further, "White supremacy culture is reflected in the current realities of disproportionate and systemic harm and violence directed towards BIPOC people and communities in all aspects of our national life – health, education, employment, incarceration, policing, the law, the environment, immigration, agriculture, food, housing" (Okun, 2021). White supremacy culture is not just limited to White-dominated organizations or groups; it also shows up in BIPOC communities and non-Western cultures.

White supremacy culture is particularly relevant for equity-centered climate adaptation and resilience planning because equitable community involvement requires tolerance of complexity and decentralization of power (NAACP, 2021). When many entities and identities are involved in planning and decision making, it takes time to build trust and collaboration. Many forms of communication are necessary to reach diverse audiences rather than "one right way." Progress cannot always be measured in quantifiable terms. Activities that build relationships are just as important as activities to get things done. Having many different entities collaborate on planning is much more difficult and time consuming than one entity creating the plan and making decisions, but it results in a decision that is owned by the community. Equity-centered climate resilience building means that we must mitigate and manage tendencies towards urgency, paternalism, perfectionism, individualism, defensiveness, fear of open conflict, worship of the written word, and other aspects of White supremacy culture. Characteristics of White supremacy culture are presented in Appendix C, along with a link to their antidotes.

Components of an Ideal Climate Adaptation Plan

Here are nine components of an ideal climate adaptation plan and questions presented by Kapwa Consulting to help center equity throughout your process:

- **Disproportionate impacts**: Does the proposed action generate burdens (including costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?
- **Shared benefits:** Can the benefits of the proposed action be targeted in progressive ways to reduce historical or current disparities?
- **Accessibility**: Are the benefits of the proposed action broadly accessible to households and businesses throughout the community – particularly communities of color, low-income populations, minority, women and emerging small business?
- **Engagement:** Does the proposed action engage and empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner?
- **Capacity building:** Does the proposed action help build community capacity through funding, an expanded knowledge base or other resources?
- **Alignment and partnership:** Does the proposed action align with and support existing communities of color and low-income population priorities, creating an opportunity to leverage resources and build collaborative partnerships?
- **Relationship building:** Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government?
- **Economic opportunity and staff diversity:** Does the proposed action support communities of color and low-income populations through workforce development, contracting opportunities or the increased diversity of city and country staff?
- **Accountability:** Does the proposed action have appropriate accountability mechanisms to ensure that communities of color, low-income populations, or other vulnerable communities will equitably benefit and not be disproportionately harmed?

(Williams-Rajee, 2016)

Institutionalize Representation

Before local governments undertake equity-centered, community-driven climate change adaptation, leadership should first commit to transformative organizational change towards diversity, equity, justice, diversity and inclusion. Leadership's explicit commitment to these approaches will be critical to shifting culture internally and demonstrating credibility in pursuing equity-based resilience initiatives. In the U.S., staff of municipal agencies that oversee community development are often not representative of the communities that they serve, which limits their ability to advance racial justice (Ross et al., 2019 in Hughes et al., 2021). This disparity in representation underscores the need for leadership credibility through internal BEJDI work as well as explicit public commitments.

In addition to local government, consulting firms and sustainable building industries with which cities partner on climate adaptation planning and implementation are likewise dominated by White people. Lack of awareness about educational and professional opportunities in green building, sustainability, and environmental management compounded by insular hiring practices, discrimination, and the prevalence of White supremacy culture prevent people of color from joining these professions. The result is a dearth of BIPOC professionals in these sectors and industries, perpetuating racial inequity in climate adaptation and resilience (NAACP 2021).

Institutionalizing representation starts with an assessment of institutional diversity and cultural competence. The University of Michigan Graham Sustainability Institute recommends that institutions assess the racial, ethnic, and gender representation in the institution and comparing that with the demographics of their community. If the institution collects information about employee's race, gender, and ethnicity as a part of their Human Resources practices, that information can be used to create a demographic profile of the employees. If no such information is available, the institution might create a survey to collect that information. The institution can use the American Community Survey to determine the demographics of the community with whom it is working. Use the results of the community assessment as a benchmark for institutional diversity (Hughes et al., 2021).

Transformative institutional change towards belonging, equity, justice, diversity, and inclusion is a journey that institutions commit to authentically and for the long run. This is not a checklist to complete, but rather an iterative process of self-reflection, analysis, change, learning, and more self-reflection. It cannot be delegated to a single department or committee, but must be driven by leadership from the top of the institution and implemented throughout every agency, department, and touch every staff member. Measurable progress may take years and unless changes are profound, they will be insufficient. The transformation does not have to be complete before climate adaptation and resilience planning is undertaken, but it should be begun and take place alongside a commitment to centering equity in the resilience building process.

Below we offer recommendations for BEJDI for municipal institutions, adapted from J.E.D.I. Heart (Bonta, 2019):

1. **Wisely invest significant funds and for the long term.** DEI (diversity, equity, inclusion) change work does not occur in one-year grant cycles and requires sustained, wise investments in effective, high impact, and transformative DEI work over many years.

2. **Develop a guiding vision/goal and a "why" statement** to guide your DEI capacity building investments. The statement will clarify why DEI is important to your foundation's overall vision and mission, and the vision/goal will support your grantmaking approach.

3. **Hire an external thought partner.** The thought partner can provide crucial support and wisdom for the effective development, implementation, and troubleshooting of the program.

4. **Be patient and commit to a growth mindset.** Consider developing a long-term strategy (5-10 years) that includes a vision, a change process, time for reflection (to assess lessons learned and adjust as needed), and deliberate funding strategies at varying growth stages.

5. **Partner with staff of color and community organizations.** Co-create a DEI capacity building grantmaking program with environmental organizations within the region served and staff of color from these organizations. Gather information to gauge interest in and build support for DEI capacity building and to shape a program relevant to its users. Intentionally build relationships based on trust and safety, especially with staff of color, to create an atmosphere that encourages frank feedback.

6. **Add support for people-of-color-led/justice-focused groups working on environmental issues.** Provide funds/support to groups that are led by people of color or that focus on justice. These groups are currently the most effective at achieving both racial equity and environmental outcomes in the community, whereas many mainstream environmental groups will not achieve consistent and high-impact racial equity outcomes until they reach a more advanced DEI stage. Building DEI capacity to reach this advanced stage takes time.

7. **Build DEI capacity at your institution**. Everyone, especially leadership, must be deeply introspective about your own DEI journey—humbly understanding your own current state of DEI competency and being honest with yourselves about how much work you need to do to achieve your own DEI transformation. A shared experience of learning and growing together with grantees promotes authenticity, integrity, and a mutual appreciation for the importance of DEI capacity building and the need to do it well.

8. **Support effective, ongoing trainings for all staff, especially leaders**. Focus on personal development, deep transformation, and racial equity that addresses White dominant culture and institutional and systemic racism.

9. **Support the hiring of DEI consultants and staff** that can guide and implement report recommendations and insights. For example, they can facilitate racial equity trainings, guide change management, and co-develop new organizational systems and structures that support the values of diversity, equity, and inclusion and that do not reinforce White dominant culture. DEI consultants and dedicated DEI staff can teach, guide, and coach staff and board members and, when used discerningly, can expedite DEI progress.

10. **Support readiness work to prepare related agencies beginning the DEI journey.** It is important to set organizations and staff up for success and on the right footing from the beginning, focusing on high impact change work that addresses root issues. This readiness work should include all staff and board racial equity trainings and making the case for DEI.

11. **Support people of color networks**. Doing so would support the retention, survival, and success of staff of color and provide a solid foundation for all DEI work in this sector.

12. **Support readiness across municipal institutions and community partners embarking on their DEI journeys.** Provide a space for leaders and DEI change agents from several organizations to learn about racial equity and organizational change management together and participate in facilitated discussions about why DEI is important to each of their missions. These activities will help build awareness and commitment and equip change agents and leaders with knowledge, skills, and approaches to more effectively advance DEI at their organization.

13. **Support learning cohorts for organizational leaders.** To effectively lead an organization committed to DEI, leaders must continue to increase their DEI aptitude. To support this growth, funders should create sustained learning and support cohorts comprised of leaders from multiple organizations.

14. **Support the development of a staff of color cultural assessment**. Since the experiences of staff of color are the barometers for the effectiveness of DEI work, evaluating these experiences over time can provide critical information about effective DEI practices and approaches and the environmental movement's growth.

15. **Collect and produce case studies** of agencies, departments, and partner organizations demonstrating how DEI capacity building is adding value to their mission and making them a better organization. This could motivate and inspire others to do DEI capacity building and dispel the myth that DEI is mission drift, which commonly blocks DEI progress. (Bonta, 2019)

If municipal institutions are to become truly diverse, equitable, and inclusive, we must be "all in." In a future where people of color will be a majority of the U.S. population, committing substantial resources to transformational change will ensure a stable and sustainable foundation for future generations (Bonta, 2019). The prospect of undertaking such a journey may be daunting, but institutions are far from alone. There are many organizations, consultants, and resources

available to help, and municipalities, organizations and companies that have already undertaken this journey for peer support.

Resources:

- www.climatediversity.org.
- Local and Regional Government Alliance on Race and Equity GARE
- National Coalition Building Institute
- http://institutionaldiversityblog.com/

Integrating Belonging, Equity, Justice, Diversity, Inclusion in Climate Resilience

Equity is a frame, a goal, and a process, and as such, it cannot be boiled down to a linear step-by-step recipe. Centering equity in climate resilience practice means that we must apply the guiding principles to the entire process, and sometimes engage in a spiral process where we revisit earlier steps farther along in the process. We recognize that some elements of planning do have a linear process where certain actions are more successful if preceded by others, so we have presented our recommendations for equity in this ten-practice format, recognizing that these actions may be taken in other orders or should be conceived of as a dynamic, continuous spiral process:

1. Understand historical context
2. Co-create community
3. Collaborate across sectors
4. Equity goal setting
5. Data collection and analysis
6. Assess assets and vulnerabilities
7. Explore hazards
8. Identify and prioritize strategies
9. Implementation
10. Accountability

Step 1: Understand Historical Context

Community planning in the U.S. has a long history of racism and segregation. Understanding this history and its impacts in the community is crucial to equitable climate resilience and adaptation planning. Understanding history and context is essential not just for understanding how the physical landscape took its form but also for understanding the experiences of the people living in it, their risks, vulnerabilities, and assets. This step is the foundation for building community trust and the process of authentic community engagement

Racism and injustice in community planning in the U.S. is pervasive in the following forms:
- The violent seizing of land from indigenous peoples which involved driving them off their ancestral homelands, killing them, breaking treaties, and desecrating and destroying sacred indigenous sites;
- Seizing land and property from Black communities using the power of eminent domain for construction projects and community improvement benefiting White communities;
- Red-lining, restrictive lending practices, discriminatory housing practices that prevented people of color from buying, building, or renting homes in White neighborhoods;

- Siting polluting industries in or near BIPOC communities, dumping pollution in or near BIPOC communities, performing extractive activities on land that indigenous people depend on for ecological and spiritual purposes;
- Destroying BIPOC businesses and neighborhoods when they have become successful (Tulsa race massacre);
- White flight and disinvestment from predominantly black and brown neighborhoods leading to spirals of economic and social decline;
- Gentrification of desirable BIPOC neighborhoods that lead to the displacement of their original residents;
- Urban planning and transportation strategies that discourage people of color from entering or traveling through White neighborhoods;
- "Drained pool" policies where public amenities such as parks, swimming pools, and public schools are shut down so that people of color would not have access to them;
- Sustainable buildings and green development marketed to increase rent, "branding," and leasing profits, or benefit corporate shareholders of the development firm or building owner;
- Neighborhood-level gentrification associated with tree canopy cover and other strategies to combat extreme weather conditions may disenfranchise lower-income and BIPOC communities;
- Social disarrangements of environmental injustice, such as food deserts or liquor stores, are concentrated in lower-income and BIPOC communities;

Justice in equitable climate resilience planning starts with acknowledging the history of racism and injustice in a community, and setting the intention to address the harms of the past and reverse discrimination through better planning and development. Ask community advisors about the local history, including previous government actions that may affect the community's opinion of government in general and your agency specifically. Use this information to shape your engagement approach (BARHII, 2021).

Questions to consider:
- What is the environmental and land use history of this community?
- What are the demographics of this community? How has it evolved over time?
- What policies and zoning practices have shaped the demographics of the community?
- In what ways has this community been exclusionary towards marginalized communities?
- What does it feel like to live in this community?
- For what reasons have people moved into this community or left it?
- What are the needs of this community?
- What challenges are there in advancing equity?
- How engaged are community members in community development?
- What are the organizations that connect community members to each other?

<u>Acknowledge past wrongs</u>

Before institutions or departments can collaborate on equitable climate adaptation and resilience planning, they must first acknowledge their role in perpetuating institutional racism and their upholding of systems and practices that have excluded marginalized groups. Practitioners and leaders must acknowledge White supremacy and the ways it has harmed BIPOC communities. The backbone agency of the cross-sector partnership should be transparent and honest about partners' past performance and challenge themselves and all partners to institutionalize racial equity (Bernabei, 2017 in Hughes et al., 2021).

It is tempting to focus on the future without addressing the past, particularly when it brings up issues that make planners uncomfortable. Understand that to build trust it is sometimes necessary to access past grievances and listen to understand old wounds and wrongs that have not been addressed. Planning agencies need to recognize the historic and systemic dispossession of land from Indigenous communities as an active process of dispossession that still shapes dispossession of Black, Indigenous, and communities of color. Learning to be comfortable with being uncomfortable expands engagement skills and opens communication to avoid past mistakes (Ross et al., 2019). Through a co-ownership model, a participatory planning process addresses histories of harm with identifiable actions and refers to local communities as practitioners with embedded knowledge on the relationship between local and human ecologies (USDN, 2017 in Hughes et al., 2021).

To address the challenge of building trust and healing past community traumas, the NAACP recommends Healing Justice, a framework created by Cara Page and the Kindred Southern Healing Collective. "Healing justice is about bringing practices of collective healing and transformation into our work for social change. It is about acknowledging and addressing the intergenerational trauma and pain that lives in our bodies. It is about building movements that last because we value how we treat ourselves and how we treat one another." For more information on the concept of Healing Justice and various resources to help incorporate the practice into your climate adaptation planning process, visit www.healingcollectivetrauma.com (Kennedy et. al., 2019).

> Communities need a pathway to be able to meaningfully contribute to governance in a way that does not exist in some communities who are extremely disenfranchised. This starts by having an avenue to express community needs and creating mechanisms to ensure safe spaces where rights are respected and uplifted. *(Jacqueline Patterson, founder and executive director at The Chisholm Legacy Project, 2022).*

A summary of main points and helpful tools for Step 1 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Invest the time to understand the historical context of racism and environmental injustice.
- Acknowledge the history of injustice within the specific community and the larger structural context.
- Ask community advisors and local experts to share the community opinion of the government in general and in terms of adaptation planning.
- Acknowledge past wrongs of institutions and departments (similar to the one creating the climate action plan) in perpetuating institutional racism and upholding systems of oppression.

🔧 [Healing Collective Trauma](#) from Cara Page and the Kindred Southern Healing Collective

🔧 [Seven Best Practices for Engaging Communities in Resilience Planning](#) from the Bay Area Regional Health Inequities Initiative

🔧 [Nuts and Bolts of Building an Alliance](#) from The Movement Strategy Center

🔧 [The Racial Equity Evaluation Tool](#) from The Urban Sustainability Directors Network

Step 2: Co-Create Community

> Climate adaptation is social cohesion building. If we have the checklist, we forget that we're human. We continuously try to make climate work into a math problem or a checklist problem. The question now is, how do we return to humanity? *(Kristin Baja, Director of Support & Innovation, Urban Sustainability Directors Network, 2022).*

Equitable climate resilience begins with community engagement because the community members are the ones who live with the impacts of climate change and will deal with the consequences of interventions. Marginalized communities also have personal knowledge of hazards and inequities and understand the solutions that are needed to address these challenges. However, in most communities, middle and upper-class White people sit on almost every committee, while BIPOC residents are left out of the conversation (NAACP, 2021). Those who are retired, don't have to work, or are flexible during the work day or their free time are most able to participate. Black and brown people have increased from 20% of the U.S. population in 1980 to 40% in 2019 (NAACP, 2021). Climate adaptation and resilience planning should have proportional representation when it comes to determining a community's future. A justice- and equity-first approach centers and prioritizes marginalized populations in the

engagement processes around design and development of a community adapting to climate change (NAACP, 2021).

To be effective in including and creating a sense of belonging in frontline communities, practitioners should incorporate the following practices into their engagement methods. The following principles are based on best practices and lessons learned from the environmental justice community engagement partners in the greater Boston region which include Eastie Farm in East Boston and Communities Responding to Extreme Weather (CREW) in Dorchester. Both organizations have extensive community knowledge and operate as hubs for adaptation and mitigation networks. Through interviews, community events, and ground-truth dialog, these community partners exhibit principles of equitable adaptation and their expertise and generosity is greatly appreciated. The elements shared from Eastie Farm and CREW are supported by our literature review of best practices in community engagement:

Build Community Trust and Ensure Everyone has a Voice

Climate resilience should reflect the needs and interests of the full range of stakeholders. These include government agencies, institutions, developers, businesses, community-based organizations, and residents. Partner organizations also bring resources (information, technical assistance, finances, materials, facilities, volunteers, etc.) to the process. Examples include environmental justice organizations, labor organizations, emergency response/first responders, housing organizations, religious and interfaith Groups, African American sororities and fraternities, other civil rights organizations, civic associations, youth organizations, and elder organizations (Ross et al., 2019). Avoid the mistake of burdening one or a few community leaders with the onus of speaking on behalf of, or holding accountable, the entire resident population. By bringing in the community in creative ways, folks are empowered to get involved and advocate for themselves without over-extending the energy of the go-to grassroot leadership (NAACP, 2021).

To ensure everyone feels their participation is valued, establish building community trust as central to all outreach efforts. Trust should be viewed as a process rather than a single initiative or event. All engagement efforts should begin with an organizational self-assessment to identify capacity, limitations, history, and power dynamics. Recognize that to build the trust of community members can require overcoming prior ineffective outreach efforts, as well as instituting more effective engagement strategies. Tools include active listening to fully understand the needs of community members, promising only those outcomes that can be delivered, and following through on promised actions. Ongoing availability from planning and community development staff beyond scheduled outreach events will also increase communication and trust (Ross et al., 2019).

Co-Design with the Community for Authentic Empowerment

Empowering communities to positively shape their future begins with fostering democratic participation and community driven civic leadership. This requires an intention to engage

community organizations and residents from the beginning and create a plan with the community on how to do that engagement. Work with community members, including contracted community-based organizations (CBOs), to design a community engagement strategy for each phase of the planning process and metrics for measuring success—before the project launches. Engage these partners in other elements of project planning so they can act as effective intermediaries between residents and the rest of the project team. Establish shared decision-making structures so that expectations about collaboration are clear (BARHII, 2021).

Once you have convened the community partners, create the space for open, transparent, and constructive dialogue to occur. To get there, ensure everyone is on the same page on the definitions used in the conversations. Accompanying honest dialog is the intention to connect with people's lives and realities meaningfully. A practitioner should continue to establish trust with everyone involved to ensure community members feel open to share their own personal stories and the issues most important to them. With this honest and safe dialog, the community members may reveal how they connect, or how they don't connect, to the projects, programs, and policies that are being prioritized in the community (NAACP, 2021).

Support Existing Intersections, Meet People Where They Are

In order for people to have the ability to participate, the facilitator should go to community spaces: places of worship, community centers, schools, local businesses, neighborhood events, and other existing places where people gather. Honor people's time and commitment through support to the space/people through a shared meal, childcare volunteering, membership/sponsorship, or another offer. Select meeting locations where the community feels safe, including those who fear discrimination from ICE, law enforcement, or other government agencies. Find places that are accessible for people with differences in sight, hearing, and mobility. When hosting a gathering or inviting people to connect with a partner organization to share feedback, remember what brings a community together in the first place. Arrange for open, unscheduled social time in addition to the task at hand (NAACP, 2021).

Part of this work should include the goal to strengthen community networks and resilience. Incubate around community strengths (support and grow) where people *are now*. We emphasize the importance of identifying and building on existing assets and strengths within communities. Community partnerships are an important resource for additional data as community-based organizations and other local entities may have access to resources and personnel unavailable to smaller local governments (Abrash Walton et al., 2021).

Do not focus on a specific sector without understanding where the community is right now. Besides consideration of the physical space, the 'where' includes the mental and emotional space people are bringing into the climate conversation. This includes current concerns, apprehensions, hopes, needs and visions. It is important to take the time to identify any potential stakeholders that are already convening the community around topics related to the conversation to align efforts and avoid duplication of outreach. For example, if a community is

dealing with safe and affordable housing issues, or the ability to secure fresh food, connect the work you are doing with the issues and solutions they are currently seeking.

Build Out Existing Capacity and Compensate Engagement

Make equitable engagement a budget priority. Allocate funds for compensating participants fairly for their time, prioritizing resources for training and educational sessions for community members, community-based organizations, and institutional partners in the content areas they will need for their effective participation. If your agency is creating a Request for Proposals (RFP) for the project, clearly describe your community engagement objectives and community engagement budget (BARHII, 2021). Residents are community experts and bring value to the discussion. Facilitators are usually compensated for their time in these meetings, and residents should be compensated as well. This can be with financial or other incentives. NAACP recommends payments begin at a rate of at least $25–50 per hour with a $100 minimum payment, which could come in the form of a gift card, cash, or access to organizational offerings of interest (ex. membership dues, event access, etc.) (Kennedy et. al., 2019).

Contract with community-based organizations. To connect deeply in community, hire grassroots community-based organizations to help design and carry out engagement activities. If creating an RFP, include scoring criteria that benefit CBOs or require sub-contracting with local organizations. In grant proposals, invite CBOs to be co-applicants with you for funding. Make contracting easy. Small, short-term government contracts can be burdensome for community-based organizations to administer. Seek to provide sustained, multi-year funding commitments. Speak with your procurement office or general counsel to design simple contracting procedures (BARHII, 2021).

To be most successful, residents will need an investment in community capacity to carry out the planning process from a philanthropic partner, local government, or through a combination of public and private dollars. This will not only help compensate for this work, but also could fund education and even more engagement activities. Provide trainings to agency staff and community partners in climate communication, climate science, and resilience solutions to establish a shared vocabulary and common baseline of understanding. Offer trainings on how to navigate governmental systems (BARHII, 2021). Residents may need to bring in an additional policy expert, planner, or designer to translate solutions into policy language or proposals, particularly to help establish metrics for measuring the impact of the policy/project (NAACP, 2021). In addition, compliment your investments in community partners with well-trained community engagement staff within your agency. Ensure agency staff are trained in community engagement, cultural competency, facilitation, and community organizing approaches, and speak languages present in the community. Establish communities of practice to support adoption of new strategies and learning from successes and mistakes (BARHII, 2021).

Ensure Information is Accessible and Understandable to All

Create accessible materials. When disseminating information, choose language which is clear and could be understood by individuals from an array of educational and cultural backgrounds. Before materials are submitted or dispersed, truth check and review components of accessibility with individuals from the community to address communication barriers. Always include a glossary and be sure to spell out acronyms (BARHII, 2021).

Speak the language. Understand that English is not a universal language. When discussing climate change impacts, information must be translated into multiple languages, and research must be pursued to find linguistic specifics spoken in the community, in order to promote buy-in and trust. Facilitators, translators and interpreters can be helpful in the process of communicating adaptation plans (BARHII, 2021).

Share what you heard. During all phases of community engagement, the planning team must ground truth the information received back to the community and clearly identify how the experience has influenced the planning process. Multiple avenues of communications should be employed and accurate summaries should be shared with all components of the planning team and decision makers as well as the community (BARHII, 2021).

Employ a "no wrong door" approach. Understand how different lived experiences may translate to different values and practices within climate action planning. Members of the community, planners, lawmakers and all other positionalities involved in climate action may engage with planning from different perspectives, no one perspective is inherently right, and approaching these differences with openness and humility will allow for collaboration and integration of many priorities (BARHII, 2021).

Ensure information is shared equitably. Create enough time for everyone to access, digest and understand the information. This means getting the information into the hands of the community members at least one week ahead of the conversation. Let people know how they can prepare for a meeting by sharing context for the meeting, asking about language/accessibility/transportation/childcare/technology/other needs, offering opportunities to help build the agenda, sending items to review, and answering questions in advance. Consider setting up a Buddy System ahead of time, which would have people get in pairs to meet each other beforehand. Keep notes or a recording for anyone who might have missed a gathering. After a gathering, follow up to see how people felt about the experience, summarize the outcomes and next steps, delegate tasks within the group, and address any needs that the group didn't get to. Check out an example of assessing people's needs and preferences for virtual meetings from the Portland Clean Energy Fund here (NAACP, 2021).

Consider using the digital realm for outreach along with the other methods. Planning agencies who utilize new frontiers of digital outreach both engage new audiences and reveal existing inequities. Current culture has seen an uptick in digital communications because of the global pandemic, this new era has also highlighted the need for equity considerations in terms of digital literacy, internet access, ableism in planning design and representation in digital spaces. Climate adaptation efforts may benefit from a more concentrated, block by block,

assurance of internet access to boost communication and resilient capacity for disable community members especially (Hughes et al., 2021).

Support Community Dynamics

Frontline communities have likely already faced climate disasters and other crises and already have systems in place for mutual aid and adaptation. Take the time to learn about the community resilience assets that are already in place instead of reinventing the wheel. For example, during the COVID-19 pandemic, many communities found ways to engage in mutual aid utilizing existing social networks and social media. These communities-created networks of informal, highly-responsive entities that show up for basic needs during emergencies such as distributing food and supplies. In many places these networks remain in place after the disaster to offer residents solidarity in the face of evictions, provide ongoing healthcare, respond to murders committed by police, organize politically to support policy efforts, build community gardens, and more (NAACP, 2021).

A summary of main points and helpful tools for Step 2 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Ensure everyone has a voice by encouraging adequate representation
  - Begin with an organizational self-assessment to identify capacity, limitations, history and power dynamics.
- Co-Design with the community through practices of empowerment
  - Design engagement strategy with the community for each stage of the process.
  - Establish shared decision-making structures.
  - Create space for open, honest, constructive and transparent dialog.
- Support existing intersections by meeting people where they are
  - Physically go to existing and accessible community spaces where people already feel safe and seen.
  - Take the time to identify stakeholders already convening the community around topics related to the climate discussion.
- Build-out existing capacity and compensate engagement
  - Make equitable engagement a budget priority
  - Contract with community-based organizations
  - Hire and train agency staff while investing in community and climate capacity
- Ensure information is accessible and understandable by all
  - Create accessible materials
  - Speak the language
  - Share what you heard
  - Employ a "no wrong door" approach

Step 3: Collaborate Across Sectors

Approaching climate resilience as an intersectional challenge requires government agencies that typically work separately on environmental, social, and economic priorities to work together to advance equity and justice. Traditionally, many cities have relegated climate adaptation planning to just one department or agency. A 2014 survey of climate adaptation plans worldwide found that a majority of cities actively involved only two sectors — departments of environment and land-use planning — in adaptation planning and implementation. A minority of cities actively engaged agencies responsible for wastewater, water, and solid waste management, and an even smaller number actively engaged those responsible for economic development and health. An equitable adaptation planning process involves integrated management with multiple government agencies, and shifts from purely technical interventions to more social and institutional approaches (Shi et al., 2016).

Multi-Scalar Collaboration

Climate adaptation often focuses on the local unit of the community or municipality, but climate impacts are often not local, and regional and multi-scalar collaboration is often needed for effective and equitable planning. Watersheds and floodplains do not match jurisdictional boundaries and hurricanes impact communities across state lines. Local governments often lack jurisdiction over key areas central to climate adaptation, such as regional transportation, energy, and water infrastructure systems, as well as social services such as public housing, welfare, risk insurance, and building codes. Ambitious and long-term infrastructure projects often require national or state leadership, funding and coordination. As a result, municipal adaptation planning tends to focus more on short-term activities like disaster-risk preparedness instead of long-term adaptation and resilience (Shi et al., 2016).

There is a need for coordination both horizontally and vertically across local, state, and federal government agencies and sectors for climate adaptation and resilience planning. These partnerships could include government agencies focused on
- sustainability

- planning and zoning
- transportation
- water quality
- natural resources
- public works
- waste and sanitation
- emergency management
- public health
- economic development
- parks and recreation

(Hughes et al., 2021)

Collaboration could take the form of a committee with representatives from each of these agencies along with community partners. Each agency brings with it its own connections to the community and understanding of assets and vulnerabilities. It is essential to have buy-in from the involved agencies for implementation that will require their permission or resources. Having those agencies involved from the beginning makes future implementation much easier.

> A summary of main points and helpful tools for Step 3 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.
> - Integrate management of climate action with multiple government agencies and across regional and multi-scalar spaces.
>   - Shift from technical interventions to more social and institutional approaches.
>   - Focus on short-term activities like disaster-risk preparedness instead of long-term adaptation and resilience.
>   - Involve multiple agencies from the beginning of a project to assist future implementation.
>
> 🦴 Health In All Policies from the Public Health Institute and American Public Health Association
>
> 🦴 Lessons in Regional Resilience from The Georgetown Climate Center

Step 4: Equity Goal Setting

An understanding of the environmental, social, and equity historical context of the community should guide your goals towards equity in climate adaptation and resilience. As we've established in the Terminology and Concepts section, equity is the equal and fair distribution of opportunities, resources, and environments free from climate hazards and risks regardless of

individual/group identity or background. All four forms of equity should be firmly centered in the planning process:

A. Procedural equity: Ensuring that processes are fair and inclusive in the development and implementation of any program or policy.

B. Distributional equity: Ensuring the resources or benefits and burdens of a policy or program are distributed fairly, prioritizing those with highest need first.

C. Structural (intergenerational) equity: A commitment and action to correct past harms and prevent future negative consequences by institutionalizing accountability and decision-making structures that aim to sustain positive outcomes.

D. Cultural equity: A commitment to undoing racism and anti-blackness through an intentional deconstruction of White supremacist assumptions and behaviors and the concurrent construction of equitable multicultural norms (Kapwa Consulting, 2020).

Create a Mission Statement

Once all the stakeholders have been convened, draft together a succinct mission statement that serves as the guiding vision for an equity centered climate adaptation plan. The mission statement should embody the goals of the process and the values that will be practiced. Facilitators/practitioners should commit to fostering belonging, advancing justice, and centering equity throughout the iterative process and BEJDI as desired outcomes of the project. This includes cross-sector collaboration and community involvement in all steps of the process; adhering to the Jemez Principles when working with stakeholders; and minimizing White supremacy culture while instead practicing its antidotes (See Appendices B and C).

Here is an example of a mission statement from the California Integrated Climate Adaptation and Resiliency Program, developed for their 2018 climate adaptation plan:

All Californians thrive in the face of a changing climate. Leading with innovation, California meets the challenge of climate change by taking bold actions to protect our economy, our quality of life, and all people. The state's most vulnerable communities are prioritized in these actions. Working across all levels of government, the state is prepared for both gradual changes and extreme events. Climate change adaptation and mitigation is standard practice in government and business throughout the state. California meets these goals with urgency, while achieving the following long-term outcomes:
- All people and communities respond to changing average conditions, shocks, and stresses in a manner that minimizes risks to public health, safety, and economic disruption and maximizes equity and protection of the most vulnerable.
- Natural systems adjust and maintain functioning ecosystems in the face of change.
- Infrastructure and built systems withstand changing conditions and shocks, including changes in climate, while continuing to provide essential services.

Draft a Vision Statement

The planning process should begin with a visioning phase that imagines what climate resilience looks and feels like in their community. Visioning should be an expansive process where the community is allowed to imagine their ideal future, without the limitations of budget or obstacles to implementation. What does the outcome look like in all indicators of community well-being: environmental, social, and economic? What does resilience to climate change as well as other challenges look and feel like? Using strategies for increasing inclusion and belonging, make sure that those who are most vulnerable or traditionally marginalized are prioritized. make their voices heard. Build trust by acknowledging past harms, sharing information and inviting their contribution to data collection, making special efforts to invite and include marginalized members, and making space for marginalized voices.

Center Frontline Communities

The mission statement should explicitly center the needs and voices of frontline communities. When the needs of the most vulnerable are prioritized, the entire community is better prepared and protected from climate disasters. The NAACP defines frontline communities as "groups of people who are directly affected by climate change and inequity in society at higher rates than people who have more power in society. They are "on the frontlines'' of the problem. For example, people of color, people who are low income, who have disabilities, who are children or elderly, who are LGBTQIA, who identify as women, etc. (NAACP, 2021, p. 12). Centering the needs of frontline communities means that we employ targeted universalism, targeting strategies towards frontline communities in order to achieve universal goals such as climate adaptation rather than using the same strategies universally without regard for the specific needs of each population.

Advance Cross Sector Goals and Collaboration

The mission statement and stated goals should also include cross sector advancement and collaboration. Mainstream approaches to climate adaptation often emphasize physical interventions like sea walls, berms, porous pavement, etc. without much consideration for the social and economic aspects. Equitable climate adaptation and resilience planning means that all indicators of community progress and well-being are advanced together. These include:

- **Environmental:** The community has access to clean air, clean water, fresh food, parks, trees, wildlife habitat, clean streets. Residents have protection from climate disasters and mitigation practices like recycling, composting, bike lanes, public transit; There is no disparity between wealthy and poor residents in their access to these resources.

- **Economic**: The community's overall GDP is sufficient to sustain a robust local economy, GDP per capita is sufficient for cost of living; there is not too much income disparity

between wealthy and poor residents; the community provides good employment; Goods and services are available for purchase in the community.

- **Social:** Residents have access to quality healthcare, education, libraries, recreational amenities, social services, public transit and other social amenities; enjoy a sense of safety and belonging; Not much disparity between wealthy and poor residents in their access to these resources.

Advancing all indicators of community progress and well-being means that government sectors that work on different needs in the community, such as environment, transportation, energy, healthcare, education, employment, youth/elder services need to work together on climate adaptation and resilience. In addition, we cannot emphasize enough the importance of engaging the community itself in the planning process. Community members should take part in exploring hazards, assessing assets and vulnerabilities, investigating options, prioritizing and planning, implementation, accountability in all stages of the project. Because marginalized communities have traditionally been excluded from planning processes, extra efforts need to be made to enable and empower their participation (see Step 2: Co-Create Community).

There are critical, cost-effective, points within which a community may leverage their influence in the development and execution of a project. In the pre-design and planning phase (which occurs before any proposals are created) a community may underscore elements of equity and sustainability essential for the project's success. Policy and priorities should be developed through a community-driven process which should inform the subsequent project design all the while continuing to embed opportunities for participatory decision making and design paradigms (NAACP, 2021).

<u>Four Steps to Making Equity Real</u>

The Greenlining Institute (Mohnot et al., 2019) offers the following guidance on how to integrate equity in the goal setting process:

Embed Equity in the Mission, Vision, & Values: Policies and grant programs should explicitly state a commitment to equity and specifically identify the vulnerable populations they seek to benefit. The effort must aim to create comprehensive climate strategies for communities that not only build the resilience of physical environments but address other health and economic injustices that climate impacts exacerbate.

Build Equity into the Process: Processes should deeply engage community members so as to learn about their priorities, needs and challenges to adapting to climate impacts. The information gathered should inform the development and implementation of the policy or grant program.

Ensure Equity Outcomes: The implementation of the policy or grant program must lead to equity outcomes that respond to community needs, reduce climate vulnerabilities, and increase community resilience. Outcomes can include improved public health and safety, workforce and

economic development, and more.

Measure & Analyze for Equity: Policies and grant programs should regularly evaluate their equity successes and challenges to improve the effort going forward (Mohnot et al., 2019, p.5).

A summary of main points and helpful tools for Step 4 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Create a succinct mission statement to serve as the guiding vision for the plan.
- Create a vision statement that centers enter frontline communities in the climate action plan.
- Advance all indicators of community progress including environmental, economic and social with the community as experts in the process.
- Consider all forms of equity in the planning process.

Resiliency Guidebook: Equity Checklist from the California Governor's Office of Planning and Research

Climate Action Through Equity from the City of Portland Bureau of Planning and Sustainability

Pathways to Resilience from the Movement Strategy Center

Community-Driven Climate Resilience Planning: A Framework from the National Association of Climate Resilience Planners

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Step 5: Data Collection and Analysis

Robust data about climate hazards, assets, and vulnerabilities are essential to climate resilience planning. Rather than exclusively relying on experts in data collection and analysis, climate resilience practitioners should involve community members in both the design of the data collection process and evaluation (Hughes et al., 2021). Perspectives of frontline communities are particularly valuable with information pertaining to disparities in residents' abilities to cope with climate hazards. The University of Michigan Graham Sustainability Institute identified three key strategies for urban climate change adaptation that center equity in data collection and analysis: a) valuing and incorporating both quantitative and qualitative data; b) disaggregating data along racial lines and spatial scales, and c) conducting a root cause analysis (Hughes et al., 2021).

Value Qualitative Data

Quantitative and qualitative data are critical when working to advance equity in climate adaptation and resilience planning. Quantitative data may consist of weather data, demographic data, and geographic data, while qualitative data refers to subjective information that may come from case studies, interviews, surveys, and observations. Use research methods that engage participants in defining indicators, collecting data, and analyzing results (BARHII, 2021). Use methods such as community resource mapping, walk audits, and photovoice projects to empower residents to identify and reflect on issues that affect their lives and identify prospects for positive change (BARHII, 2021). For example, residents could mark flood locations on maps or identify intersections of vulnerability. Maps should be approachable and incorporate community landmarks rather than resemble more technical maps used by professional planners (Hughes et al., 2021). If possible, compensate residents for their efforts (BARHII, 2021).

Disaggregate indicators and data by race and at the smallest geographic scale possible
Communities need disaggregated, accessible, and updated data to understand how climate hazards are distributed and how interventions would address racial disparities (Hughes et al., 2021). Information such as flood instances, flood insurance coverage and claims, health data, are often not available by race. But compiling this information is important to get an understanding of racial disparities in climate impacts and vulnerabilities.

Conventional data collection often leaves out certain populations who may be outside the traditional bounds of study metrics and methodologies. For example, renters are sometimes left out of housing strategies addressing climate impacts. Similar dynamics leave out indigenous tribes, homeless people, or residents living in unincorporated areas. Prioritizing these people in data monitoring would require cities and localities to expand the means for which this data is collected. With a more robust data set, planners and adaptation professionals may better understand the risks and disparities BIPOC communities may face (Hughes et al., 2021).

Conduct a Root Cause Analysis
Root cause analysis (RCA) is the process of discovering the root causes of problems in order to identify appropriate solutions. RCA assumes that it is much more effective to systematically prevent and solve for underlying issues rather than just treating ad hoc symptoms and putting out fires. Root cause analysis can be performed with a collection of principles, techniques, and methodologies that can all be leveraged to identify the root causes of an event or trend. Looking beyond superficial cause and effect, RCA can show where processes or systems failed or caused an issue in the first place (Root Cause Analysis Explained: Definition, Examples, and Methods, n. d.).

Identifying root causes is an important strategy to avoid deficit thinking, which blames personal choice or behavior for racial disparities (Hughes et al, 2021). When it comes to racial justice, root causes for problems in BIPOC communities include a) racial segregation, b) lack of living wage jobs, c) gaps in educational opportunities, and d) environmental injustice. These contribute to poor indicators of community well-being such as poverty, sickness, crime, social isolation, environmental degradation, etc. These factors contribute to the vulnerability of a community leading them to have low climate adaptation and resilience. See the figure below for

an illustration of root causes and social and biological factors that contribute to vulnerability to climate change.

Figure 2: Root Causes and Factors Affecting Sensitivity to Climate Change
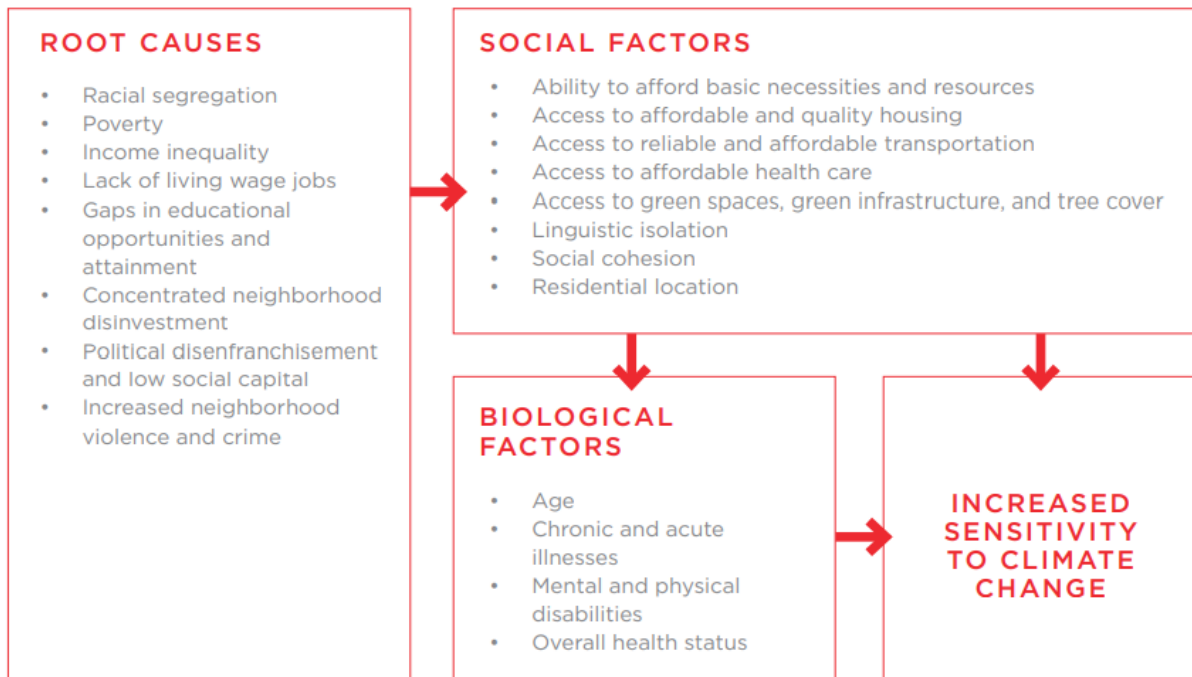
(Yuen et al., 2017)

After identifying root causes, communities need to brainstorm how to address root causes to improve symptoms. Planning for climate adaptation and resilience presents an opportunity for communities to address root causes and improve economic, social, and physical well-being simultaneously with climate adaptation and mitigation (see Step 8: Identify and Prioritize Strategies).

A summary of main points and helpful tools for Step 5 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Involve frontline communities in data evaluation.
- Identify frontline communities for flooding and priority areas for engagement.
- Track and assess the amount of public money spent in each neighborhood.
- Focus funding on frontline communities.
- Involve frontline communities in decisions about data collection.
- Collect qualitative and quantitative data.
- Disaggregate data and indicators by race.
- Review indicators at the smallest geographic level possible.

- Publicly share data, e.g., on an open data platform.
- Conduct a root cause analysis.

🔧 [Racial Equity: Getting to Results](#) from The Government Alliance on Race and Equity

🔧 [Local Resilience Assessment](#) from Rooted in Resilience (formerly Bay Localize)

🔧 [Spatial Justice Test for Race and Income](#) from Justicemap.org

🔧 [More Than Numbers: A Guide Toward Diversity, Equity and Inclusion (DEI) in Data Collection](#) from the Schusterman Family Foundation

🔧 [Digital Storytelling](#) from the Climate Alliance Mapping Project

Step 6: Assess Assets and Vulnerabilities

Planning for equitable climate resilience starts with understanding the assets and vulnerabilities of a community. By examining the social, financial, and political assets and vulnerabilities within a community, we can better understand how climate change exacerbates current challenges and how the community's capacities can be harnessed to address those challenges. Exploring this broad context makes resilience planning more relevant to people's lives and helps communities integrate climate action into their existing values and priorities (BARHII, 2021). This assessment can be accomplished through an equity-centered data collection and analysis.

Identify Community Assets and Vulnerabilities

To define someone by their challenges is the definition of stigmatizing them. It is essential that practitioners begin with identifying community assets before exploring vulnerabilities and hazards. Asset-framing and asset identification is a process where individuals and communities are first defined by their aspirations and contributions, rather than their challenges and deficits. This first step is essential in identifying the skills, organizations, infrastructure, social networks, and other aspects of a community before moving on to a process in identifying the hazards and impacts to those assets. This creates a narrative that promotes investment in the community by changing the association of at-risk communities being recipients of charity versus empowered communities leading change. In the BEJDI practice, it is imperative to connect systemic disparities with their systemic causes. This systems thinking approach is essential to connect the linkages between climate change and the direct and indirect impacts on community assets.

Assets and vulnerabilities often exist alongside each other. The California Integrated Climate Adaptation and Resiliency Program Technical Advisory Council defines climate vulnerability as "the degree to which natural, built, and human systems are at risk of exposure to climate

change impacts. Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality" (Governor's Office of Planning and Research, 2018, p. 2).

The table below is a summary of assets and vulnerabilities that can be considered for an individual as well as community. People facing disadvantage or discrimination due to demographics often experience vulnerability in residential, mobility, environmental, and other factors, but they may also have assets such as citizenship, social connection, and employment. Those in a marginalized demographic and with more vulnerabilities often have lower socioeconomic status, which result in fewer resources for preparing, coping and recovering from climate impacts (Governor's Office of Planning and Research, 2018). Individuals and communities may have more vulnerabilities in some categories and assets in others.

Demographic Gender Age Race Ethnicity Sexual orientation Location Language	Civic Immigration status Citizenship Nationality Voting access Representation in Congress Marital status
Mobility Vehicle ownership/access Public transit Physical ability/disability Evacuation routes "Land-island" communities Traffic density	Environmental Sewage/waste management systems Floodplain and flood prone areas Air pollution Extreme heat Tree cover Parks and green space Wildfire and smoke Water contaminants Toxic cleanup sites Impaired water bodies Pesticide exposure
Community assets Public schools Libraries and community centers Recreational amenities Hospitals and healthcare centers Public transit Violent crime rate Correctional facilities	Residential Homelessness Home ownership Homeowners or renters' insurance Property value Location of home relative to environmental hazards Living condition

Public safety Domestic violence hotline Substance abuse services Emergency response Back up grid energy plans for hospitals Quality and cost of housing market	Flammable roof Flood-proofing Domestic violence shelters Shelters for LGBTQ youth and adults Value, quality, and density of residential construction
Economic Employment Occupation Income Net worth Education level Criminal record Earning potential vs. job base provided Community GDP per capita Two parent household Job opportunities	Health Ability/disability Mental health Substance abuse Social connection Health insurance Distance to critical service providers Doctors or nurses per capita Food costs Supermarket availability Community gardens

Climate adaptation and resilience planning should focus on frontline communities and prioritize strategies that build up community assets and reduce vulnerability. Planning teams can identify vulnerable communities through a spatial review of community assets and vulnerabilities, and conversations with community leaders and community-based organizations (Hughes et al., 2021).

Community Impact Assessments

A community impact assessment (CIA) is sometimes a tool that is used to understand the impacts of a given development project on the community. Often containing an assessment of community assets and vulnerabilities (including demographics, economy, environment, equity, health, mobility, etc.), it is used to inform planning and analyze impacts of projects on communities. They are often used by transit agencies and projects receiving federal funding that need to undergo environmental review and mitigation measures under the National Environmental Policy Act (NEPA). Sometimes called social impact assessments or similar names, they may focus on specific areas, such as assessments for health, economic, and environmental impacts (NAACP, 2021).

The NAACP Centering Equity in the Sustainable Building Sector Initiative created a summary list to help center frontline communities project impact assessments. The climate action practitioner must again understand the limitations to an equitable process when simply checking-off the main points or just utilizing the tools. In order to advance BEJDI, the community needs to be involved in identifying impacts. The following summary assists the reader in analyzing climate adaptation planning as a first step in a much bigger process to foster equity.

- Assess community assets and needs that was completed before a proposed project is being evaluated for its potential impacts;

- Include all burdens that impact the community both major and minor, no matter how small, and the secondary effects of any impacts (for example, if residents are worried about more traffic, consider also that more traffic leads to more air pollution, too);
- Evaluate the cumulative effects—meaning the full impact when the incremental impact of a specific project is added to the other past, present, and reasonably foreseeable future impacts (which might be minor on their own but significant when experienced collectively);
- Ensure that each CIA is unique and customized to the community, including explicit considerations based on race, gender, class, and other identities that are relevant to frontline communities;
- Create the CIA with local expertise in order to establish trust and real dialogue as a result of the assessment;
- Pay community experts for their work, learning lessons from public health work where this is more common practice;
- Create transparency around who is using any new data that is collected and how it will be used, as well as public accessibility of the results so that others can benefit without replicating the process from scratch;
- Establish a method of accountability and enforcement to mitigate potential harms or else prevent the project from occurring;
- Ensure that there is not just full disclosure of potential health impacts but actual informed consent through a deep community participation process.

(NAACP, 2021, p. 51)

A summary of main points and helpful tools for Step 6 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.
- Engage the community in identifying community assets and vulnerabilities
- Conduct a community impact assessment

Opportunity Zone Community Impact Assessment Tool from the Urban Institute

Section 8. Identifying Community Assets and Resources from The Community Toolbox

The CDC/ATSDR Social Vulnerability Index from the Agency of Toxic Substances and Disease Registry

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Step 7: Explore Hazards

The NOAA Climate Resilience Toolkit as well as many state resources provide excellent tools for identifying climate hazards such as hurricanes, wildfire, heatwaves, heavy rain, in U.S.

communities. These hazards vary considerably from community to community but in almost all cases are disproportionately greater for marginalized communities. Equity-centered climate adaptation and resilience planning takes into account additional risks and vulnerabilities that compound existing risks for marginalized communities.

Racial inequity in climate hazard exposure can be attributed to many systemic injustices. For example, historical housing policies and development practices have concentrated marginalized populations–usually BIPOC and low-income–in flood prone areas (U.S Water Alliance, 2020). The impacts of flooding are compounded by inadequate infrastructure, additional environmental hazards, lower quality housing, limited flood and health insurance, and lost wages. Urban drainage systems may reroute storm water to areas inhabited by socially vulnerable populations (La Rosa & Pappalardo, 2020 in Hughes et al., 2021). When floods happen, BIPOC households are less likely to have flood or health insurance and limited financial resources to repair or rebuild after a flood. These limitations may trap residents in unhealthy homes or displace them to a neighborhood with lower housing costs but even more exposure to environmental hazards (Hughes et al., 2021). People of color already tend to carry a heavier burden of health risks including elevated stress levels. Health impacts from urban flooding compound these previous and underlying health conditions and exposures (Hughes et al., 2021).

As our cities age, it is increasingly apparent that racial disparities in the quality and longevity of critical infrastructures are making BIPOC communities much more vulnerable to climate hazards. In a study of stormwater management in Detroit, Michigan, scholars found that the City of Detroit has been unable to routinely clean its 95,000 catch basins since 2010 due to a lack of funding. Seventy five percent of the drains citywide are covered by debris or have blockage, leading to street flooding (University of Maryland 2018, 23). A survey of Detroit residents conducted in 2018 found that low-income households had significantly higher rates of flooding or standing water in basements, to have been sick from these experiences, and to have had to spend money addressing flooding issues in their homes (Detroit Metro Area Communities Study, 2018). These problems are not unique to Detroit. They exist in many cities across the U.S.

The U.S. Department of Housing and Urban Development's Community Resilience Toolkit identifies specific hazards for marginalized communities in climate-related natural hazard risks. Below is a summary of the hazards they identified and their impacts on vulnerable communities:

Heat: Risks are particularly increased for those in dense urban areas that typically have higher temperatures because of the urban heat island effect. Some individuals, including those experiencing homelessness, people with chronic diseases, older adults, young children, and outdoor workers, are more vulnerable to extreme heat because they may have less access to indoor, climate-controlled spaces or a reduced ability to regulate their body temperature because of underlying chronic health conditions. Exposure to extreme or prolonged heat can result in heat exhaustion, heat stroke, respiratory problems, and even death.

Sea level Rise: Low- and moderate-income areas along the coast are generally less able to prepare for, respond to, or recover from impacts of sea level rise and coastal storms. For example, these areas may not have the financial resources to repair or rebuild damaged property, or evacuate and access temporary accommodations. They are likely to be disproportionately affected by workplace closures, lost business revenue, and loss of public services such as transportation.

Inland Flooding: Low- and moderate-income households and individuals may be less able to prepare for, respond to, or recover from flooding events when there is damage to buildings or homes, displacement, loss of transportation or services, and workplace closures. For example, these households might not be able to afford alternate accommodations or get to work when public transportation is shut down – potentially resulting in lost income or employment.

Wildfire: Low- and moderate-income individuals and local businesses may be less able to prepare for, respond to, or recover from wildfire damage. For example, individuals may have difficulty accessing transportation to evacuate in an emergency situation, accessing alternate accommodations, or recovering from the loss and damage. Resilience actions can be strategically selected and designed to help decrease the vulnerability of all communities, particularly low- and moderate-income communities, to wildfires.

Drought: Low- and moderate-income individuals and small businesses may be less able to prepare for, respond to, or recover from water shortages or employment impacts. For example, they might not have sufficient resources to purchase or transport water during a shortage, or they may have difficulty maintaining employment. Resilience actions can be strategically selected and designed to help low- and moderate-income communities and local businesses adapt to drought conditions

Erosion and landslides: Low- and moderate-income households may be less able to prepare for, respond to, or recover from damage, injury, or displacement caused by erosion and landslides. For example, these residents might not have a vehicle to evacuate in an emergency situation, be able to afford alternate accommodations, or be able to recover lost property. Local businesses may also lose economic opportunities as a result of erosion and landslides. (O'Grady et al., 2016)

Understanding these hazards would help climate resilience practitioners and their community partners target adaptation strategies towards vulnerable communities and secure additional funding for these strategies. In addition to the maps and tools provided by the government, practitioners should consult residents when exploring hazards, as they can provide lived experiences and critical insights about local hazards. They can also suggest innovative resilience actions that are specifically helpful to their situations. Information about hazards to the community can be collected via surveys, interviews, tours of homes and neighborhoods. Being in the community and hearing stories from residents living with these hazards add richness and depth to understanding that can't be obtained through looking at documents.

It is also critical to collaborate with other government agencies and community partners to understand hazards. Water and stormwater departments, public health, emergency management, disaster response, can provide more insights into hazards faced by the community. Additionally, local climate experts can provide further insights into how natural hazards are likely to affect your community in the future. They can also help facilitate resilience planning and conversations in your community or regionally. Where possible, consult local experts on climate and adaptation.

A summary of main points and helpful tools for Step 7 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.
- Collect information regarding hazards and impacts from residents and community organizations.
- Collaborate with other government agencies and community partners to understand hazards.
- Consult local climate experts.

Community Resilience Resources by Disaster Type from the U.S. Department of Housing and Urban Development

Green Infrastructure Municipal Handbook from the EPA

Water - Use It Wisely

Step 8: Identify and Prioritize Strategies

After exploring the assets, vulnerabilities, and hazards of the community for climate resilience, the planning committee should have a 10,000-foot view of the problem and its root causes. It is ready to move into Step 8: identify and prioritize strategies. This is the point at which community stakeholders need to be intensely engaged and lead the process in co-creating solutions responding to the problems they face. It is a good time to revisit the guiding principles for community engagement (outlined in Guiding Principles and Step 2) and recommit to the vision, process, and agreements the committee has made towards BEJDI.

The planning process should begin with a visioning phase that imagines what climate resilience looks and feels like in their community. Visioning should be an expansive process where the community is allowed to imagine their ideal future, without the limitations of budget or obstacles to implementation. What does the outcome look like in all indicators of community well-being: environmental, social, and economic? What does resilience to climate change as well as other challenges look and feel like? Using strategies for inclusion and belonging, make sure that

those who are most vulnerable or traditionally marginalized are prioritized. Build trust by acknowledging past harms, sharing information and inviting their contribution to data collection, making special efforts to invite and include marginalized members, and making space for marginalized voices.

Plan for multiple meetings where stakeholders can delve into adaptation strategies for specific areas. Allow the community to determine the areas of focus and how to structure the various sections of the climate action plan. Committee members can self-select into the areas they want to focus on. Allow lots of time for the group to come together and to break into smaller groups.

Climate adaptation planning can be structured in different ways. The U.S. Department of Housing and Urban Development (O'Grady et al., 2016) outlines impacts and strategies by hazard:
- Sea level rise
- Erosion
- Extreme heat
- Landslides
- Drought
- Wildfire
- Inland flooding

For each hazard, HUD provides examples of strategies in planning, buildings and infrastructure, environment, and people that communities can consider to mitigate and prepare for that hazard. Planning committees can start with the Community Resilience Toolkit or NOAA's Climate Resilience Toolkit for existing strategies to consider for their community. A community may not experience all of the climate impacts listed above or anticipate them all to the same degree. Communities may choose to focus on the threats that are the most salient for their most vulnerable populations.

The Oregon Climate Change Adaptation Framework (2021 State Agency) is organized around areas of impact. This approach has the advantage in that government agencies and community organizations are usually already structured to have agency in these domains:
- Economy
- Public health
- Cultural heritage
- Social systems
- Built environment
- Natural world
- Economy

Planning may start with a brainstorm of all the strategies, or a review of existing strategies from a prior climate action plan, similar community, or the Climate Resilience Toolkit. Next is an iterative process of prioritizing and evaluating strategies using an equity lens. This is likely to take several rounds as different groups of stakeholders consider what is important to them.

The state of California Integrated Climate Adaptation and Resiliency Program developed the following priorities for their climate adaptation plan with an equity lens:

- Prioritize integrated climate actions, those that both reduce greenhouse gas emissions and build resilience to climate impacts, as well as actions that provide multiple benefits.

- Prioritize actions that promote equity, foster community resilience, and protect the most vulnerable. Explicitly include communities that are disproportionately vulnerable to climate impacts.

- Prioritize natural and green infrastructure solutions to enhance and protect natural resources, as well as urban environments. Preserve and restore ecological systems (or engineered systems that use ecological processes) that enhance natural system functions, services, and quality and that reduce risk, including but not limited to actions that improve water and food security, habitat for fish and wildlife, coastal resources, human health, recreation and jobs.

- Avoid maladaptation by making decisions that do not worsen the situation or transfer the challenge from one area, sector, or social group to another. Identify and take all opportunities to prepare for climate change in all planning and investment decisions.

- Base all planning, policy, and investment decisions on the best-available science, including local and traditional knowledge, including consideration of future climate conditions out to 2050 and 2100, and beyond.

- Employ adaptive and flexible governance approaches by utilizing collaborative partnership across scales and between sectors to accelerate effective problem solving. Promote mitigation and adaptation actions at the regional and landscape scales.

- Take immediate actions to reduce present and near future (within 20 years) climate change risks; do so while also thinking in the long term and responding to continual changes in climate, ecology, and economics using adaptive management that incorporates regular monitoring.

(Governor's Office of Planning and Research, 2018)

An equity framework considers how strategies will advance the priorities that are most important to the most vulnerable and marginalized. In addition to climate adaptation, do these strategies help to reduce poverty? Do they provide opportunities for educational and economic advancement? Do they contribute to cleaner air? Housing security? Public safety? Flood protection? Prioritize the strategies that do the most to address these issues. In summary, an equity centered evaluation process for climate adaptation strategies should prioritize the following:
- Strategies that deliver the most co-benefits for vulnerable communities
- Strategies that address the most egregious and immediate harms to the most vulnerable
- Strategies that reduce greenhouse gas emissions the most

It is important to stress that community decision making takes longer than anticipated and is not likely to be a linear process. It takes time to be inclusive, consider and reconsider all options, gather data and do the research. It is tempting to want to adhere to a timeframe and be frustrated when deadlines are not met. Remember that a sense of urgency is one of the main characteristics of White supremacy culture and marginalizes those who don't have all the information or time available to do the work quickly. A slow, deliberate, inclusive process may seem inefficient but in the long run results in a plan with more buy-in and better implementation.

A summary of main points and helpful tools for Step 9 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Intensely engage community stakeholders to lead the process in co-creating solutions.
- Plan for multiple meetings where stakeholders strategize in specific areas.
- Work with the community to determine how to structure the climate adaptation plan.
- Use an equity lens to prioritize and evaluate strategies.
    - Be sure to include strategies that deliver the most co-benefits for vulnerable communities, strategies that address the most egregious harms to the most vulnerable, and strategies that greatly reduce greenhouse gas emissions.
- Understand and expect that community decision making takes a long time!
- Remember that a sense of urgency is a key characteristic of White supremacy culture.

🖉 [2021 Oregon State Agency Climate Change Adaptation Framework](#) from the Department of Land Conservation and Development in Collaboration with Multiple State Agencies

🖉 [(divorcing) WHITE SUPREMACY CULTURE Coming Home to Who We Really Are](#) from White Supremacy Culture

🖉 [Mapping Our Future, A Work Plan for Public Engagement & Equity in Climate Adaptation Planning](#) in the San Francisco Bay Area

🖉 [Roadmap Inclusive Planning Action Analysis Module](#) from C40 Cities

🖉 [Guide to Equitable, Community-Driven Climate Preparedness Planning](#) from The Urban Sustainability Directors Network Innovation Fund

Step 9: Implementation

Communicate the Plan

Once a draft climate resilience plan has been created, communicating the plan is an important process for inviting further input and preparing the community for implementation. By following the steps and principles explained in this paper, the community should already be familiar with and engaged in the climate action process. However, even with the best intentions and efforts, those who didn't have capacity or interest in participating may have been left out. Thoughtful, accessible communication ensures that all community members have a minimum level of awareness about the climate resilience plan.

Communication of the plan should happen before stakeholders are convened, throughout the planning process, and implementation. A core element of equitable climate action planning ensures an iterative process of adaptation. Members of the planning team should not simply be satisfied with a plan once it has been published. Efforts of reviewing, revisiting, and monitoring are essential to adaptation. As the plan is communicated along the way, the community should be invited to participate, even at the perceived end of the process.

In order to adopt a climate action plan successfully and implement appropriately, the plan must be communicated thoroughly to all walks of life which comprise the community ecosystem. Communication should utilize all available mediums and outlets – and be communicated in the language/s of community members – to ensure the widest reach possible. These include:
- Presentations and announcements in collaboration with community-based organizations
- Neighborhood associations and block clubs
- Bulletin boards: schools, work places, libraries, rec centers, coffee shops
- News: TV, radio, paper
- Social media
- Surveys
- Tabling at fairs, farmer's markets, community events
- Door to door, mass mailing

It is a good idea to create a website just for the climate resilience plan so that it can easily be found on the web and be a one-stop-shop for all information related to the planning process. The website should have video, captions, written docs, and be visually appealing so that it can be engaging for all audiences.

Implementation

Once a plan has been finalized, adopted, and communicated, the climate adaptation process moves into implementation. This stage often requires its own planning with attending vision, data collection, strategies, and community involvement. The manner of implementation can exacerbate existing inequities or help redress past injustices.

University of Michigan Graham Sustainability Institute provides the following points of guidance for integrating equity into implementation:

- **Engage the community:** Once the planning process concludes, engage the community deeply in implementation, with clear leadership roles for CBOs. Consider establishing a community advisory council or public review team to provide frequent feedback and help build momentum behind community-supported priorities.
- **Keep communicating**: Share data on your progress for ongoing accountability and trust building. Provide documentation of the investments and policy decisions that have been made to advance equitable resilience strategies. Measure baseline conditions in the community—including any disparities in health outcomes by race, income, and neighborhood—to understand the impact of your resilience strategies.
- **Reflect and revise:** Once the ink has dried, discuss with the community what parts of the engagement process went well and what could have gone better. Integrate the most successful aspects into future planning and implementation processes. Share your successes and shortcomings for continuous learning and improvement. Work with policy makers, agency leaders, and community members to remove structural barriers and scale up local innovations.

(BARHII, 2021)

The Equity Working Group of the City of Portland, Oregon created a separate "Equity Implementation Guide" for their climate resilience plan. One of the project directors said, **"**Their feedback was rich in content but difficult to place in a policy document. This eventually resulted in the development of an Equity Implementation Guide, a companion document to the Climate Action Plan that captures the specific recommendations as well as an overall approach to incorporating equity as actions are implemented. The guide serves as a tool for building staff capacity to effectively implement the policy guidance in the Climate Action Plan" (Williams-Rajee, 2016). The Implementation Guide allowed the community to focus centering equity in implementation with as much intention as in the planning process.

The work of climate adaptation implementation should be accomplished by the community as much as possible. This puts economic investment into community businesses, reduces the climate impact of projects, and creates jobs for residents. Local implementation can also draw on local knowledge about a community to avoid pitfalls and draw on resources that only the community knows about. This means that the bidding and procurement process needs to be as inclusive as possible. Typically, the bidding and procurement process reach only a small handful of contractors that departments are already comfortable working with. Equity means incorporating interventions such as bonus points for women or BIPOC-owned businesses, businesses that prioritize sustainable and equitable strategies and practices, and businesses that engage in fair business practices and pay a living wage. These strategies are known as social or sustainable procurement and increase the opportunity to add value through the bidding process" (NAACP 2021).

Here are some considerations for an equity-based procurement process:
- Publicize your request for proposals so that community based and minority owned businesses are able to respond. Ask for recommendations from community members,

contact minority owned businesses, and connect with businesses associations in the community.

- Make your request for proposal easy to respond to. Don't request information that isn't relevant. Allow bidders to respond through interviews as well as written proposals.
- Prioritize businesses that engage in sustainable practices, such as LEED certification, sourcing materials locally, using sustainable materials, renewable energy, recycling, etc.
- Prioritize businesses that hire local residents and pay a living wage.
- Prioritize businesses that hire and sub-contract a high percentage of people of color.
- Prioritize businesses that are BIPOC or women owned.
- Specify contracts that are fair–present the scope of work clearly, compensation, timeline, etc.
- Consider contractors that are not for profit, such as nonprofit organizations, educational institutions, and community-based organizations.

A summary of main points and helpful tools for Step 7 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Communicate the plan widely throughout the community.
- Ensure that communication is a two-way street by inviting feedback and participation.
- Remember that communication is an iterative process.
- Engage in equity-based bidding and procurement.
- Make bidding opportunities widely available.
- Prioritize local, minority owned businesses that engage in sustainable and fair business practices.

Step 10: Accountability

any community improvement plans have languished on a shelf or veered off course when implementation ran into obstacles. Equity is often sidelined in favor of convenience and efficiency when climate adaptation plans lack accountability. Stakeholders should adopt a learning mindset and incorporate an evaluative component into each step of the planning process where participants can reflect on what has been learned, give feedback, and improve the process.

Once the project is in implementation, community members should be involved in monitoring, evaluation, and updating the adaptation plan if needed (NAACP 2021). Clear metrics and evaluation methods should be established for racial equity in climate adaptation (NAACP 2021).

Local planners and public health professionals who wish to measure community resilience need readily available resources that are cost effective, time efficient, and easy to access, whether they want to implement an intervention, or just establish a baseline assessment for community

resilience planning (Abrash Walton et al., 2021). The following are some strategies to support long-term community led monitoring of equity in climate adaptation:

Formalize Evaluation and Monitoring: Formal memorandums of understanding (MOU) or equivalent specifying terms of evaluation can help solidify the accountability mechanism. The same community members who helped to create the plan can be involved in the monitoring for the long term through formal structures, like councils and advisories, which can play a role in enforcing agreements and keeping projects on track. Periodic check-ins can be scheduled for the community to give feedback and evaluation. Pay community members whenever possible to do this work (NAACP 2021).

Track distribution of funding and investments: Implementation usually follows funding during a project. Failing to track how these funds are spent across a community can result in funding allocated disproportionately to privileged communities. Tracking should explicitly examine the distribution of funding for climate resilience across racial groups and neighborhoods. This data must be transparent and accessible to the public (Hughes et al., 2021).

Embed planners and community-centered trainings: Community-led monitoring centers the lived experiences of community members. Whether in the assessment of vulnerabilities, assets, priorities, and potential climate actions, community led monitoring develops metrics and processes driven by community input. These include internal and external assessments of the accessibility of a space, laying out a map of community connections, and committing accessible resources and information to communities through embedded planners working at the community level (Hughes et al., 2021).

Practice local, accessible sensing technology and mutual data collection systems: An adaptation process which aims to co-produce knowledge can be seen in concepts like open data sources and shared knowledge-gathering. In order to ensure transparency, initiatives must understand historical context and address the unequitable lack of digital access, especially in marginalized communities. There is a relationship between technical data and lived experience in which community members can prioritize climate action by utilizing local perspectives (Hughes et al., 2021).

Integrate intergenerational transitions and archiving: Engage young people in the community and train them to become future leaders and stewards of the climate resilience plan. Make sure that the lived experiences of all age demographics as well as racial groups are captured. By making data available across age demographics, a community may become empowered in their history and unique vantage point of the local ecosystem and culture (Hughes et al., 2021).

Community partnerships are a critically important resource for additional data as community-based organizations and other local entities may have access to resources and personnel unavailable to more modestly resourced local governments. Use of semi-structured interviews, surveys and focus groups can be used to generate much of the data needed for measuring

resilience. Progress can be evaluated through use pre- and post-intervention surveys to document progress and participant input. The U.S. census website and other publicly available sources can yield additional demographic and socio-economic data. Practitioners can generate low-cost data needed for other metrics by using online mapping tools (including the National Environmental Public Health Tracking Program) weather stations, and local emergency preparedness, mitigation, and recovery plans. Results should be published to inform other local planners and public health officials while advancing the field of community resilience (Abrash Walton et al., 2021).

A summary of main points and helpful tools for Step 10 is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Adopt a learning mindset and incorporate an evaluative component into each step for community members to reflect and provide feedback.
- Long-term community led monitoring of equity in climate adaptation:
    - Formalize evaluation and monitoring
    - Track distribution of funding and investments
    - Embed planners and community centered trainings
    - Practice local and accessible data collection
    - Integrate intergenerational transitions and achieve strategies
    - Engage the community in evaluation and monitoring

Metrics for Sustainable and Inclusive Cities from The Urban Environmental and Social Inclusion Index

Climate Change New Frontiers In Transparency And Accountability from The E3G Research Team.

Holding your Government Accountable for Climate Change: A People's Guide from Greenpeace

Resilience Metrics Tracking progress towards adaptation success supported by NOAA program

Considerations for Specific Groups

As we have emphasized throughout this document, climate resilience, including adaptation, is highly context specific, and there is no one right way for all communities. BIPOC and frontline communities represent a wide array of populations, ethnicities, and characteristics. While it is undesirable to generalize about any group, we present in this section some research-based information about major demographic groups in the U.S. These findings may be useful to consider when working with specific populations.

Black Americans

Black Americans constitute 13% of the U.S. population and on average emit nearly 20% less greenhouse gasses per capita than Whites, and nearly 18% less than all Americans, yet they are significantly more vulnerable to the effects of climate change than non-Hispanic Whites (Hoerner and Robinson, 2008). According to The Environmental Justice and Climate Change Initiative, heat-related deaths occur at a 150–200% higher rate among Black Americans than for non-Hispanic White Americans (Shepherd, 2013). Black Americans are more likely to live in cities, which are hotter than suburban and rural areas and have poorer air quality. Asthma, which is exacerbated by heat and pollutants, affects Black Americans at a 36% higher rate of incidence than Whites (Shepherd, 2013). They are also more vulnerable to natural disasters such as floods, droughts, and storms. A 2009 study of Black Americans living along the Gulf Coast showed that a significant percentage of Black Americans lived below the poverty level and were highly vulnerable to natural disasters (Islam et al., 2009). Black Americans who are left homeless or jobless in the wake of natural disasters are often criminalized, as witnessed in the aftermath of Hurricane Katrina (Weber & Peek, 2012).

Black Americans also consistently report higher levels of belief in and concern about climate change. A 2014 nationally representative survey of U.S. adults found that 62% of Black Americans reported being personally affected by extreme weather, versus 51% for the general American public (Speiser & Krygsman, 2014). Moreover, a greater percentage of Black Americans attributed increased severity of allergies (59%) and breathing problems (56%) to climate change than did the broader U.S. public (49% and 46%, respectively) (Pearson and Schuldt, 2017). Their perceptions of climate change also seem to remain stable over time rather than fluctuate in response to acute hazards. For example, Black Americans' concern about climate change in 2000 and 2010 were almost the same, despite Hurricane Katrina disproportionately affecting a large number of Black Americans in 2005 (Macias, 2016).

Black Americans have a deep history of civic engagement and community solidarity that is a strong asset for climate change adaptation. In the nineteenth century, African American abolitionists fought slavery as well as the use of arsenic in tobacco fields (Gelobter et al., 2005). The Civil Rights movement of the twentieth century set the template for other social movements that came after it. Even though modern environmentalists frequently use the strategies developed by Civil Rights activists, they trace their legacy less to Martin Luther King, Jr., and

Malcolm X than to Theodore Roosevelt and Aldo Leopold. The tight-knit quality of many African American communities has helped them mobilize quickly in response to crises, as was often seen during the Civil Rights movement and more recently in the Black Lives Matter movement. This type of community infrastructure and trust is invaluable for fighting environmental injustices as well (Silveira, 2001).

Due to challenges Black Americans experience in mainstream environmental organizations, some have started their own conservation and environmental justice organizations. Some of these leaders are actually former employees of traditional environmental groups who tried to change those older institutions from within but couldn't make much headway (Mock, 2017). For example, Outdoor Afro started in 2009 as an organization connecting Black Americans who value the outdoors. Today it is a national nonprofit organization with leadership networks in thirty states. Says Brenton Mock:

They're not saying to the traditional environmental movement, 'You need to include us.' They're saying that the traditional green groups have neither a monopoly nor a copyright on what constitutes environmentalism. These populations have always been a part of nature's narrative, whether old, White conservationists have acknowledged them or not. They are, in fact, nature's most natural defenders, because they know viscerally what it means to be endangered. (Mock, 2017)

Another African American organization that now devotes programmatic attention to environmental justice is the NAACP, one of the nation's oldest and most respected civil rights organizations. It established the Environmental and Climate Justice Program in 2009 in recognition that environmental and climate justice are civil rights issues. It states on its website, "race – even more than class – is the number one indicator for the placement of toxic facilities in this country. And communities of color and low-income communities are often the hardest hit by climate change" (NAACP "Environmental & Climate Justice", 2019, para. 3).

When Jacqueline Patterson took on the role of Environmental and Climate Justice Program director for the NAACP at the inception of the program, there was little mainstream interest in the issue. But now, Patterson says interest is so fevered that her work is endless. "The sheer volume has mushroomed to such an extent that if I never go to sleep I might be able to get to all the various requests" (2017). There is growing recognition among mainstream environmental organizations as well as environmental justice organizations that policies that benefit Black Americans also provide the most benefit for all Americans (Hoerner J. & Robinson N., 2008).

Latinos

Latinos are the fastest growing segment of the U.S. population, and surveys show that Latinos overwhelmingly favor government action to fight climate change. "Of the issues we've polled, the only other national issue Latinos feel more intensely about is immigration reform. Action on climate change is a very high priority for Latinos – regardless of age, income, party affiliation or where they live," said Matt Barreto, professor of political science at the University of Washington

and co-founder of Latino Decisions (Latino Decisions, 2014, para. 6). In a 2013 survey conducted by Natural Resources Defense Council, nine out of ten Latino voters surveyed said it was important for the U.S. government to address global warming and climate change; and 80% favored presidential action to fight carbon pollution that causes it. The survey interviewed 805 Latinos in the U.S. from November 25th to December 4, 2013 (Latino Decisions, 2014, para. 4).

Asked about their concern about climate change, Latinos frequently cited family and health concerns. Many respondents said they want to "protect the planet for their children and future generations." Some said they were concerned over health-effects of a worsening environment, and others said they were concerned for their families in foreign countries (Latino Decisions, 2013, p.3). Many Latinos have immigrated from or have family from countries that are already severely impacted by climate change. Those familial and ancestral ties help Latinos hold a global perspective when it comes to climate change. When asked if they thought about these concerns in terms of themselves, their families, community, country, entire world, or something else, the most common response was out of a concern for the "entire world" (Latino Decisions, 2014). "We should be thinking of climate and the environment as a core Latino issue," said Barreto (Barboza, 2014, para. 10).

The Yale Program on Climate Communication conducted a study on Latino perceptions of climate change in 2017 among Spanish-speaking Latinos, English-speaking Latinos, and non-Latinos. Using levels of concern from "Global Warming's Six Americas," they found that twice as many Spanish-speaking Latinos (37%) and 29% of English-speaking Latinos said they were "alarmed" about climate change compared to 18% of non-Latinos. When combined with those who identified as "concerned" about global warming, about three in four Spanish-speaking Latinos (77%) are either "alarmed" or "concerned" as are two in three English-speaking Latinos (66%). In comparison, only half of non-Latinos (50%) are either "alarmed" or "concerned" (Leiserowitz et al., 2018). At the other end of the spectrum, one in ten non-Latinos are "dismissive," about the importance of climate change compared to 6% of English-speaking Latinos and only 1% of Spanish-speaking Latinos (Leiserowitz et al., 2018).

The study also examined political engagement on climate change among alarmed Spanish-speaking Latinos, English-speaking Latinos, and non-Latinos. Similar percentages of alarmed non-Latinos (74%), English-speaking Latinos (75%), and Spanish-speaking Latinos (79%) said they currently participate in, or would participate in, a campaign to convince elected officials to take action to reduce global warming. However, while approximately equal proportions of alarmed non-Latinos (30%) and English-speaking Latinos (28%) would "definitely" join a campaign, more than half (51%) of alarmed Spanish-speaking Latinos say they would definitely join a campaign (Leiserowitz et al., 2018). Despite the willingness of many alarmed Latinos to join a campaign to reduce global warming, six in ten alarmed English-speaking Latinos (63%) and nearly three in four alarmed Spanish-speaking Latinos (72%) said they have never been contacted by an organization working to reduce global warming (Leiserowitz et al., 2018).

When asked about barriers to contacting elected officials about global warming, all three groups that identified as alarmed marked "nobody has ever asked me to" as the top reason. Spanish-speaking Latinos said, "I don't know which elected officials to contact" as the second most frequent response, and "it's too much effort" as the third. English-speaking Latinos cited "I don't know which elected officials to contact," and "it wouldn't make a difference" as the second and third most popular reasons (Leiserowitz et al., 2018). Notably, one in three alarmed Spanish-speaking Latinos (33%) said they might attract unwanted attention from immigration authorities, compared with about one in ten alarmed English-speaking Latinos (11%) and alarmed non-Latinos (9%) (Leiserowitz et al., 2018).

Latinos are a diverse group that speak different languages, come from different countries, and have different political party affiliations. Despite these differences, their views are fairly similar on climate change, suggesting great potential for engagement. Research on motivations for concern on climate change suggest that Latinos resonate strongly with values that emphasize social harmony, respect, and concern for the welfare of one's family and community (Holloway, Waldrip, & Ickes, 2009). Trust could be a barrier to political engagement, as many Latinos have negative experiences with government, in the United States as well as their country of origin (Speiser & Krygsman, 2014).

Asian Americans

Though comprising only 6% of the U.S. population, Asian Americans are the fastest growing and most diverse minority group in the United States and have the highest education and income levels. Asian Americans also show the highest levels of concern for climate change and support for policies aimed at mitigating climate change of all racial and ethnic subgroups (Speiser & Krygsman, 2014). In the Yale 2010 study, 65% of Asians said they were worried or somewhat worried about global warming, compared to 76% of Latinos, 59% of Black Americans, and 60% of Whites. Asians were the most likely to say that global warming is caused by human activities, ahead of all other groups. Asians also responded in favor of a carbon tax, carbon trade, and policies to support renewable energy more than any other group (Leiserowitz and Akerlof, 2010). A 2016 National Asian American Survey found that more than three-quarters (76%) of Asian Americans supported "setting stricter emission limits on power plants in order to address climate change" compared to 64% of adults nationwide (Ramakrishnan & Lee, 2016). Asian Americans and Pacific Islanders are also significantly more likely than the national average to prioritize environmental protection over economic growth. In the 2012 National Asian American Survey, 60% of Asian Americans prioritized environmental protection over economic growth, compared to the national average of 41% (Ramakrishnan & Lee, 2012).

Like Latinos, Asian Americans also resonate with caring for future generations and ties to the global community as reasons to act on climate change. "We care about our families and opportunities for our children, and we see the environment as part of that," said Parin Shah, leader of Asian Pacific Environmental Network's communications and policy work (Chang, 2014). Many Asian Americans are immigrants or descendants of immigrants from Asian

countries severely impacted by climate change. A study by Climate Central found that ten of the top twelve most at-risk countries from climate change are in Asia: China, India, Bangladesh, Vietnam, Indonesia, Japan, United States, Philippines, Egypt, Brazil, Thailand, and Myanmar. More than 145 million people in China and 48 million people in Vietnam live in areas that will be covered by sea-level rise by the end of the century (Strauss, Kulp, & Leverman, 2015).

Native Americans

> The four elements of fire, water, earth and air that sustain all Life are being destroyed and misused by the modern world. Because of our relationship with our lands, waters and natural surroundings which has sustained us since time immemorial, we carry the knowledge and ideas that the world needs today. We know how to live with this land: we have done so for thousands of years. We are a powerful spiritual people. It is this spiritual connection to Mother Earth, Father Sky, and all Creation that is lacking in the rest of the world. *(Tom Goldtooth, Executive Director, Indigenous Environmental Network. 2009, para. 20)*

Native Americans are 1.6% of the American population, and they are a powerful voice on climate change and environmental justice. As people who still rely on subsistence ways of living, Native Americans have often been the first to experience the effects of climate change and the most affected. "Populations such as ours that have a close relationship with nature, that still have traditional practices off the land and waterways, are experiencing these real effects, from Alaska to many of our tribal people here in the lower 48," said Tom Goldtooth (Navajo/Dakota), executive director of the Indigenous Environmental Network (Hilleary, 2017, para. 3).

The consequences of climate change have been devastating for many indigenous communities in the U.S. In Alaska, where winter temperatures have warmed by 6º F, their homes have fallen into the sea as a result of eroding shorelines, their wild food sources have dwindled or migrated, and unreliable sea ice has made travel (by dog sled or snowmobile) precarious or impossible, cutting communities off from one another and restricting movement. More than thirty Native villages are either in the process of or in need of relocating their entire village, but due to high costs and land restraints, many tribes are unable to relocate to safer areas (US EPA, 2017). In the lower 48 states, mild winters in the Midwest have led to an increase in deer ticks and other disease-carrying parasites, decimating Minnesota's moose population, which Native Americans use as a source of sustenance (Marcotty, 2017). In the Northwest, where Native tribes subsist on salmon, climate change has affected migration patterns and the health of the fish stock (Brodbeck, 2017). On the Gulf Coast of Louisiana, an entire indigenous community—Isle de Jean Charles—is relocating because of sea level rise (Lim, 2017). In the Southwest, communities are devastated by wildfires, fifteen-plus-year droughts, siltation and desertification, and more. In July 2010, a flash flood left the Hopi First Mesa without potable water or sewage, and they were forced to spend more than $900,000 to repair their infrastructure. "If you're asking where climate is most impacting tribes, the simple answer is everywhere," said Garrit Voggesser, director of the National Wildlife Federation's Tribal Partnership program (Hilleary, 2017, para. 7).

Native Americans have also borne the brunt of the burden from fossil fuel development, from extraction to transportation, refining and waste disposal. Whenever fossil fuel development comes in conflict with Native American tribes, their rights are almost always violated. The proposed Keystone XL pipeline, if built, would go through 1,179 miles from southern Alberta to the Gulf of Mexico, cutting across the territories of numerous tribes from the Dene and Creek Nations to the Omaha, Ho-chunk, and Panka tribes, contaminating their drinking water and destroying sacred sites (Boos, 2015). Under President Trump, Secretary of the Interior Ryan Zinke signed orders promoting coal, gas, and renewable energy extraction on federal and tribal lands. Said Tom Goldtooth:

> When we have a U.S. administration that is a denier of science and the facts, we have a serious problem that violates our treaty rights to fish and hunt and gather. These aren't just rights that we negotiated in treaties with the United States. These are inherent rights. (Hilleary, 2014, "Shift in US policy," para. 2)

Even solutions to climate change often have negative consequences for Native American communities. Nuclear energy, which is lauded as an important alternative to fossil fuels, produces toxic radioactive waste which the government tries to store on tribal land. In 1987, the office of the Nuclear Waste Negotiator, created by Congress, sent letters to every federally recognized tribe in the country offering hundreds of thousands and even millions of dollars to tribal council governments in exchange for storing nuclear waste on tribal lands. Most of the tribes refused, but a few were coaxed into accepting the waste, including the Goshute Indians Reservation in Tooele County, Utah (Kamps, 2001). More than 77,000 tons of nuclear waste has been stored at the Skull Valley Goshute reservation in Utah. In "Carbon Pricing: A Critical Perspective for Community Resistance," indigenous leaders share the perspective that "carbon pricing is a false solution that does NOT keep fossil fuels in the ground," and "token revenues distributed to environmental justice communities from carbon trading or carbon pricing can never compensate for the destruction wrought by the extraction and pollution that is the source of that revenue" (Gilbertson, 2017, p. 4). Indigenous climate leaders have called on their communities to resist carbon pricing as a solution to climate change.

Despite their vulnerability, Native Americans are not powerless bystanders in the fight against climate change. They have led the People's Climate Movement in organizing protests, marches, and actions against fossil fuel development. They have resisted the Dakota Access Pipeline, fracking, and other forms of fossil fuel extraction on their lands. Faith Spotted Eagle, a member of the Yankton Sioux Nation, became the first Native American to win an electoral college vote for president after her leadership in opposing the Keystone XL and Dakota Access oil pipelines (Pearce, 2016). Native Americans participate in international treaties and negotiations around climate change, and they are passionate and effective advocates for human rights, future generations, and all life. Without the voices and dedication of indigenous communities, many environmental campaigns would not be as urgent or compelling.

Climate Adaptation Planning and Indigenous Communities

Indigenous peoples in the United States require special consideration when it comes to climate resilience. There are currently 574 federally recognized Tribes in the United States, each of which has its own history, traditions, and preferences when it comes to interacting with U.S. officials. To center equity in our guidance for practitioners, this section has been intentionally structured differently from the rest of this guide. With such diversity in indigenous peoples, we do not attempt to summarize one approach to doing climate adaptation with indigenous communities or filter their contributions through the lens of our White and academic framework. Instead, we provide an interview with one indigenous climate expert to highlight one such perspective, and point to several resources that have been developed by Indigenous practitioners to help mainstream practitioners in their interactions with indigenous communities.

That said, we want to highlight two considerations:

As we have emphasized in this guide, community engagement that fosters belonging, equity, justice, inclusion, and diversity requires understanding historical context before community engagement, or even extending a request for participation. This is especially important for indigenous communities. For centuries, indigenous peoples have been systematically displaced and their connection to land and resources intentionally severed to fulfill European "manifest destiny" imperatives (Gilio-Whitaker, 2019). In order to survive powerful efforts to eradicate their culture and people, indigenous communities have fought for political autonomy while simultaneously fighting for the preservation of their culture and livelihoods. In order to advance equity centered adaptation, practitioners must work hard to acknowledge the systemic power dynamics oppressing indigenous peoples, address past wrongs, and practice extra care and intention in honoring their autonomy and respecting their cultural practices.

The Climate Science Alliance has co-produced with Indigenous peoples an extensive [Building Authentic Collaborations with Tribal Communities](#) resource menu that helps practitioners work with indigenous communities. The site points to resources for understanding historical context, tribal sovereignty, active listening, wisdom and reciprocity, partnerships and collaboration, with key terms and additional resources. It is a highly informative introduction for government officials and residents alike.

Another important consideration is that many Indigenous communities consider their relationship to the natural world as a kinship. Humans are not above animals and plants in a hierarchy of the living world like in classical Western cosmology, rather they are at the same level, like brothers and sisters in a world where all living beings are part of the same community. These kin have their own rights, autonomy, practices, preferences which should be respected, consulted, and taken into consideration when human activities impact them. Tribes have different ways of acknowledging/consulting/communicating with these nonhuman entities which could include rivers as well as fish, rocks as well as trees. Understanding this concept goes far in realizing why traditionally Western extractive approaches for human benefit do not usually fit into Indigenous climate adaptation and resilience.

Strategies from the Tribal Adaptation Menu

The Tribal Adaptation Menu, developed as part of the [Climate Change Response Framework to work with the Northern Institute of Applied Climate Science (NIACS) Adaptation Workbook](), explains many of the strategies used by Indigenous communities to adapt to climate change. Before embarking down the list of strategies, the Tribal Adaptation Menu acknowledges the guidance and contributions of the elders, language speakers, families, spirit-helpers, and other named and unnamed members of the ecosystem. Then, guiding principles for interacting with tribes are highlighted to exemplify how to develop culturally appropriate climate adaptation actions. This document is specific to the Anishinaabeg perspectives from the Great Lakes region, the interdisciplinary team stresses that a first step to beginning any climate adaptation project is to edit this document with the lens of the unique indigenous communities involved. The document intends to be living, in the sense that it is never truly finished. We provide an outline here to give an idea of some of the strategies and encourage practitioners to read the source document for details.

Strategy 1: Consider cultural practices and seek spiritual guidance.
Strategy 2: Learn through careful and respectful observation (gikinawaabi).
Strategy 3: Support tribal engagement in the environment.
Strategy 4: Sustain fundamental ecological and cultural functions.
Strategy 5: Reduce the impact of biological and anthropogenic stressors.
Strategy 6: Reduce the risk and long-term impacts of disturbances.
Strategy 7: Establish, support, and recognize opportunities for beings or sites of concern to the community to withstand climate change
Strategy 8: Maintain and enhance community and structural diversity.
Strategy 9: Increase ecosystem redundancy and promote connectivity across the landscape.
Strategy 10: Maintain and enhance genetic diversity.
Strategy 11: Encourage community adjustments and transition while maintaining reciprocity and balance.
Strategy 12: Support a new ecosystem balance after a major disturbance.
Strategy 13: Design and modify infrastructure and access to match future conditions and community needs
Strategy 14: Accommodate altered hydrologic processes.

(Tribal Adaptation Menu Team, 2019)

Interview with Nicolette Cooley

In a conversation with Nicolette Cooley, a tribal member of the Navajo Nation and co-manager of the Institute for Tribal Environmental Professionals (ITEP) Tribes and Climate Change program, we gained insight around beneficial and harmful practices for non-indigenous climate adaptation professionals to consider. The following is an amended transcript of that

conversation (Cooley, 2022). We have intentionally not synthesized or summarized it in order to defer to the source of knowledge.

Community climate adaptation involves bringing together government, non-governmental organizations, and the local community or grassroots organizations. What approaches best promote belonging, equity and inclusion?

The most important approach to promote belonging, justice and equity in the social and environmental systems of climate adaptation, is being open minded.

Be generous and consistent with invitations. Invite people to the planning process who do not have professional titles in the environmental field within the tribe or community. Intentionally invite community members, like the local bus driver or janitor at the school, because they have helpful knowledge that adaptation professionals may not be aware of or inclined to consider. In terms of representation, everyone should be invited, yet a careful consideration of who fills the room and how is also important. If there are too many federal or state officials then the space is not held for community members. There must be an appropriate representation for ideas to spark innovation. There is never too much indigenous representation due to the long fight for representation in the first place. The onus of creating and holding the space for this new way of decision-making is on the folks who have power and maintain control.

Respect the local culture. Adaptation professionals can embrace that people and places are distinct. One of the best ways to engage in climate adaptation planning locally is to offer genuine time for introductions so people have agency to get to know each other, and therefore begin to feed that relationship of respect.

Meaningfully reflect what the community brings to the engagement process by prioritizing indigenous considerations in the strategy. By valuing culture, language and authentically acknowledging non-human relatives, the paradigm begins to shift from human centered to eco-centered.

Are there examples of equitable climate adaptation or not equitable climate adaptation that could inform other communities? Has the community been specifically engaged in creating an adaptation plan and/or exhibit characteristics of positive deviance?

In the context of grant work, strict timelines encourage tribes to look for outside consultants who are almost always non-indigenous. The barriers of time and structure do not allow for a true learning process with the community which can lead adaptation professionals outside of the tribe to complete the job required in the grant parameters and promptly leave the community. The consultants do not educate themselves on the culture or the language of the tribe who they are working with. This can lead to a lack of respect and increase in mistakes like asking the wrong questions or supporting harmful assumptions.

An example of positive deviance is a tribe who has had a climate advisory committee for ten years and is now working on its second iteration of the climate action plan. This tribe includes everyone in the process of climate adaptation planning using engagement strategies like multiple day sessions including folks from the social services area, tribal youth, high school students, and elders. Anyone can join, eat food, listen to the presentations, and take part in the activities. Some participants revealed that they understand the interconnections of climate change impacting the entirety of the community in different ways, and therefore with increased knowledge, these participants feel they have more agency in their specific circles of influence. Even after ten years of engagement, these members of the community speak to how important it is that every voice is heard within an entire process which is rooted in transparency. Even if something is not working, or there are complaints, all voices add to the value of the process.

What common mistakes or pitfalls lead to inequitable outcomes?

A common mistake often perpetrated by non-indigenous consultants, private research or academic institutions is a subscription to an inherent level of superiority where consultants believe they know more than the community they are working with, tribal or non-tribal. Someone who comes from a low-income community or rural area can be dismissed because they lack intellectual credentials or the appropriate social currency as seen in performative White-supremacy culture. Without these credentials, adaptation professionals may think tribal community members do not have knowledge worth reiterating into a climate action plan. What resources do communities need from governments for equitable climate adaptation?

What's usually missing? What do communities NOT need?

Many tribes who are sovereign nations within a state can experience being siloed and left out of important conversations on land management or agriculture. Decisions (and resulting resources) are made at the state level but information and funding are not necessarily getting to the tribes which then furthers the experience of being left out of the decision-making process. A dedicated process of inclusion, communication and transparency on the regional, state and federal levels that includes tribal governments may help break down some of these silos. The process of working in a rural community historically disenfranchised requires a different approach to information sharing. Adaptation professionals should consider the lack of broadband and build out the capacity for residents to take home climate adaptation information without depending on the internet. Videos can be downloaded, plans can be printed and mailed, collaboration can be shared on a thumb drive among other ways to creatively connect those in the community.

What resources do you recommend for learning about this topic?

The ITEP is a resource in equitable adaptation practices. It advises practitioners that tribes have the upper hand when working with consultants. The Tribes and Climate Change Program encourages funders to ensure that when tribes are applying for adaptation plan funding they hire indigenous consultants.

Tribes on land which borders towns and non-indigenous communities should prioritize more co-management of resources. This becomes very challenging when states have different rules for federal, country, and tribal happenings coupled with a lack of communication around the rules and guidelines that tribes are expected to follow. Federal agencies could promote a simpler practice of guidelines and rules for climate change projects. Tribes sometimes need to jump through different hoops and often get penalized if a partnership or agreement is not fulfilled. More collaboration, co-management, and multijurisdictional considerations would provide more access to resources. When this is not present, these conditions lead to animosity between tribes and non-tribal communities or between tribes and governments.

United States culture is steeped in colonization and extraction, which harms indigenous communities as well as ecosystems. Equity-centered climate adaptation planning requires a decolonizing intention that fundamentally changes power dynamics and shifts to a respect-based model. Even asking Indigenous communities how to do climate adaptation and then applying it through a Western lens without really understanding their worldview is disrespectful and extractive. We need to stop asking Indigenous communities for knowledge without compensating them and stop appropriating their cultural practices for our own benefit. As Kristin Baja said, "To continue to perpetuate that harm [of Indigenous Peoples by the U.S federal government] now by extracting for the sake of saying that we are listening or thinking of indigenous ways for climate adaptation purposes, is so disrespectful. I don't know if there is a way to do that respectfully if there is not a power change" (Baja, 2022).

Practitioners need to acknowledge the history of extraction in relation to Indigenous communities and support them to adapt to climate change on their own terms. They also need to "go to the source" instead of relying on summaries and checklists that claim to provide a shortcut to understanding.

A summary of main points and helpful tools for Indigenous adaptation is outlined below. Practitioners should remember that equity isn't achieved by simply checking off a list. Advancing equity requires the meaningful shift of power rooted in the understanding of existing power dynamics and intentional efforts at belonging and inclusion.

- Understand the history of government sanctioned attempted genocide of Indigenous Peoples and the lasting effects of oppression today.
- Recognize that centering indigeneity in environmental justice requires deep study and practice in decolonization.
- Non-indigenous climate adaptation practitioners must engage in internal work before attempting to include or co-opt the indigenous perspective in climate resiliency.

🖉 Building Authentic Collaborations with Tribal Communities: A Living Reference for Climate Practitioners from the Climate Science Alliance

🖉 Decolonization is not a metaphor from Tuck and Wayne Yang

ITEP Training from the Institute for Tribal Environmental Professionals

 Just Transition from the Indigenous Environmental Network

 A global assessment of Indigenous community engagement in climate research from David-Chavez and Gavin in IOPScience

 Climate change adaptation: Linking indigenous knowledge with western science for effective adaptation from Makondo and Thomas in ScienceDirect

 Relationships First: A Guide to Collaboration with Indigenous Communities from Gardner-Vandy et. al., 2020

Building an Inclusive and Equitable Adaptation Movement: Native/Tribal Voices from the Alliance of Regional Collaboratives for Climate Adaptation

Tribal Climate Change Guide from the University of Oregon and the Pacific Northwest Tribal Climate Change Project

Conclusion

Centering equity in climate resilience planning and action presents the opportunity for transformation. Climate resilience planning and action provide the opportunity to rectify past wrongs and contribute to communities that are more equitable and resilient to future changes. This paper provides an overview of approaches available to practitioners in building climate resilience by centering equity and community engagement.

The authors acknowledge the complexity in calling for equity in terms of climate resilience planning and action. The opportunity for transformation is here. We have sought to highlight and amplify the extensive analysis and resources available to climate resilience practitioners.

Government holds the role and responsibility to protect the public health, safety and general welfare of all residents. In order to fulfill this charge, climate resilience practitioners can integrate a new framework for climate resilience planning and action. We argue that climate resilience approaches will be most effective if they build on existing community strengths and assets and are grounded in goals of creating not only justice but also – and perhaps even more importantly – a sense of belonging among community members.

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Appendices

A. Case Studies

[Resilient Atlanta: Actions to Build an Equitable Future (2017)](#)
Atlanta Georgia created a resilience strategy which offers a vision, targets, and actions centered on social equity and climate change. With a focus on relevant extreme weather events, the strategy identifies 55 short and long-term actions within four leading visions: Preserve and Celebrate Who We Are; Enable all Metro Atlantans to Prosper; Build Our Future City Today; and Design Our Systems to Reflect Our Values. Atlanta was the first city out of the 100 Resilient Cities Initiative to use an open nomination process for working group selection in order to increase inclusion. The core vision of Preserve and Celebrate Who We Are aims to improve community cohesion by advancing racial equity, culture and a creative economy.

[City of Boston: Climate Action Plan (2019)](#)
Boston is one of the few cities across the country that is explicitly incorporates a focus on addressing historic and persistent race and class divisions into resilience planning.
The Department for Resilience and Racial Equity worked with more than 11,000 stakeholders, Including residents, community leaders, and City government employees across departments To develop the Resilience Boston Plan. The process included careful analysis of quantitative trends and data, internal City coordination across different planning process, community meetings, and working group convening's that together lead to actionable initiatives that articulate Bostonians' aspirations for their city. In order to introduce racial equity as a central component of Resilient Boston, the Mayor convened more than 1,000 Bostonians for a series of public conversations about race. The visions, goals, and initiatives outlined in the Resilient Boston plan are informed by the city's specific historical perspective, an analysis of current conditions, and feedback from diverse stakeholders. The plan identifies several "resilience challenges" such as economic inequality, climate change and environmental stresses, community trauma, health inequities, aging and inequitable transportation infrastructure, and systemic racism. These resilience challenges inform the plan's four visions: 1) Reflective City, Stronger People; 2) Collaborative, Proactive Governance; 3) Equitable Economic Opportunity, 4) Connected, Adaptive City. Each vision is supported by specific goals and initiatives (Kennedy et. al., 2019).

[Resilient Chicago: A Plan for Inclusive Growth and a Connected City (2019)](#)
Chicago, also part of the 100 Resilient Cities Initiative, outlines three pillars: Strong Neighborhood, Robust Infrastructure, and Prepared Communities. Among the ten resilient priorities of the plan, Racism and Racial Equity ranks fourth. Within the first pillar, the overarching vision statement centers equity, "A Resilient Chicago is a city where residents, neighborhoods, institutions, and government agencies are successfully connected to each other in the pursuit of economic opportunity, safety, equity and sustainability." A more connected Chicago is a city where residents are connected to opportunity, neighbors are connected to each other, communities are connected to other communities, governments are connected to

residents, city government is connected and collaborative, regional governments are connected and work together, and healthy communities are connected to nature.

Resilient DC: A Strategy to Thrive in the Face of Change (2019)

The D.C Resilience Strategy outlines four goals: Inclusive Growth, Smarter DC, Climate Action, and Safe and Healthy Neighborhoods. The strategy goes further to place emphasis on the fundamental role of equity and governance. Planners have outlines two place-based resilience building efforts which unite all four goals with an equitable intention. "Historically, government has been a powerful actor among societal systems that have disenfranchised entire classes of people based on their race or other aspect of identity. As government has been part of the problem, it must be part of the solution. Inclusive governments establish policies and programs that correct past injustice and empower their residents to participate, prosper, and reach their full potential."

Resilient Dallas: Comprehensive Environmental and Climate Action Plan (2020)

Dallas situates itself as leader in the climate adaptation field. Their eight goals and corresponding objectives center equity and inclusion as core values intended to improve the natural environment, the educational and economic outcomes, the affordability of housing and increased access to the transportation systems. "The CECAP recognizes the environmental injustices of the past and elevates solutions to address them, thereby placing justice at the center of this effort towards a more resilient and equitable future. The CECAP builds on previous City efforts to engender equity through actions that address both environmental quality and justice. The principles of equity shaped the development of the plan's vision, the engagement process, the development of actions, and will influence plan implementation."

Resilient Houston: City of Houston, Texas Resilience Strategy (2020)

Houston's Resilient Plan is separated into five chapters: Prepared and Thriving Houstonians, Safe and Equitable Neighborhoods, Healthy and Connected Bayous, Accessible and Adaptive City, and Innovative and Integrated Region. Within its Accessible and Adaptive City section, Houston plans to lead by example and embed equity, inclusion and resilience into all the City policies and practices. "When we talk about equity and inclusion throughout Resilient Houston, we want to be clear about not projecting a victimhood label on any Houstonian or neighborhood. The diversity of Houstonians and our communities is a source of pride for our city and contributes to our celebrated cultures and traditions. An individual's ZIP code, race, ethnicity, gender identity, sexual orientation, age, social class, physical abilities or attributes, religious or ethical values system, national origin, linguistic ability, or immigrant status should not limit their choices, opportunity, and freedom in our city. But there are disparities in health, wealth, access, and privilege that impact Houstonians and challenge our collective resilience. While every Houstonian is needed to build a more resilient Houston, the actions we take to make Houston safer and stronger will need to prioritize identifying and addressing barriers to equity and inclusion for all."

LA's Green New Deal: Sustainable city pLAn (2019)

Four key principles outline Los Angeles' Green New Deal: First, a commitment to the Paris Climate Agreement to achieve a zero carbon grid, zero carbon transportation, zero carbon

buildings, zero waste, and zero wasted water; Second, LA intends to responsibly deliver environmental justice and equity through an inclusive economy; Third, every Angeleno has the ability to join the green economy to transition the work environment; Fourth, LA resolves to lead with way by using its own resources (people and budget) to drive change. The Sustainability city pLAn goes so far as to denote an equity initiative (with a small letter e) to ensure each chapter is responsible for equitable distribution of benefits, in addition to the Environmental Justice chapter.

OneNYC 2050: Building a Strong and Fair City (2019)

The New York City Environmental Justice Alliance (NYC-EJA) is a citywide membership network linking grassroots organizations from low-income neighborhoods and communities of color in their struggle for environmental justice. Community resiliency is among NYC-EJA's campaigns to advance environmental justice. In 2018 NYC-EJA released a report, NYC Climate Justice Agenda 2018 – Midway to 2030: Building Resiliency and Equity for a Just Transition. The report details key strategies for climate change mitigation and adaptation that can be adopted by the City and State to ensure a Just transition in New York City.

Greater Miami and the Beaches Resilient305 Strategy (2019)

Florida outlines three pillars for its sustainable vision: Places, People and Pathways. These categories organize 59 actions over the immediate, short-term, and mid-term timeframes. Miami and the Beaches hopes this Resilient Strategy will serve as a foundation for building a strong network which addresses equity gaps and elevates vulnerable populations. "GM&B will complete a Development Review Checklist and guidance document for GM&B municipalities to use in support of integrating resilience and equity into their development review processes. For instance, the City of Miami Beach has incorporated flood risk considerations into their land use board review processes as a decision-making tool for land use changes. The City of Miami has used the draft GM&B Development Review Checklist to review Special Area Plans and will integrate this resilience and equity review into their standard review processes to ensure that resilience is a consideration at the early stage of large development projects."

Oregon: 2021 State Agency Climate Change Adaptation Framework (2021)

The Department of Land Conservation and Development in Collaboration with thirty State Agencies have put forth a 2021 State Agency Climate Change Adaptation Framework comprised of three parts: First, Guiding Principles which supports state action to adapt and mitigate climate change; Second, Administrative Work coordinates the response necessary to achieve integrated adaptation; Third, Adaptation Strategies outlines six themes to approach this effort including economy, natural world, built environment and infrastructure, public health, cultural heritage, and social relationships and systems. Within part two, the framework ensures use of best practices in diversity, equity and inclusion. "To establish a baseline of shared understanding, the Climate Equity Subgroup identified the need for Workgroup agencies to receive baseline DEI training. With support from the Oregon Health Authority and the Oregon Department of Forestry, the Climate Equity Subgroup retained a team of consultants to design and deliver training and guidance. The resulting DEI "level-setting" training was informed by input received through a Climate Equity Survey to which 16 state agencies responded in early

202019. The Subgroup, with consultant support, also published a Climate Equity Blueprint to be used by state agencies."

[Climate Action Through Equity: The integration of equity in the Portland/ Multnomah County (2015)](#)
Portland and Multnomah County first put forth a climate action plan with equity integrated fully into the planning process. By outlining how climate change impacts some people more than others, the plan showcases unintended consequences, discusses how old problems require new ways of thinking, describes how achieving equitable outcomes starts with new processes, and goes on to share stories and lessons learned throughout the process. "Creating the space, time and trust to identify shared interests and opportunities for mutual benefit has proven to be of immeasurable value. The reason that equity is an issue today is that past decisions, deliberate or not, created deep inequities in Portland and nearly every city in the country. An essential step to addressing these inequities is to create opportunities for the people most impacted to be at the table for today's decisions. That can happen only if policymakers and members of impacted communities know each other and trust each other. This project has made a small but important contribution to that effort."

[Greenworks: A Vision for a Sustainable Philadelphia (2016](#))
The Office of Sustainability in Philadelphia spent a year discussing what worked well (and what needed to be enhanced) in the original Greenworks plan with residents, community groups, issue experts and implementation partners within Philadelphia. Eight Visions organize the updated plan: All Philadelphians have access to healthy, affordable, and sustainable food and drinking water; All Philadelphians breathe healthy air inside and outside; All Philadelphians efficiently use clean energy that they can afford; All Philadelphians are prepared for climate change and reduce carbon pollution; All Philadelphians benefit from parks, trees, storm-water management, and healthy waterways; All Philadelphians have access to safe, affordable, and low-carbon transportation; All Philadelphians waste less and keep our neighborhoods clean; All Philadelphians benefit from sustainability education, employment, and business opportunities. Within this plan, Greenworks has created an equity index to conduct a data-driven approach to identify communities not currently benefiting from sustainability and prove outcomes in those areas.

B. Jemez Principles for Democratic Organizing

1. Be Inclusive
If we hope to achieve just societies that include all people in decision-making and assure that all people have an equitable share of the wealth and the work of this world, then we must work to build that kind of inclusiveness into our own movement in order to develop alternative policies and institutions to the treaties policies under neoliberalism. This requires more than tokenism, it cannot be achieved without diversity at the planning table, in staffing, and in coordination. It may delay achievement of other important goals, it will require discussion, hard work, patience, and advance planning. It may involve conflict, but through this conflict, we can learn better ways of working together. It's about building alternative institutions, movement building, and not compromising out in order to be accepted into the anti-globalization club.

2. Emphasis on Bottom-Up Organizing
To succeed, it is important to reach out into new constituencies, and to reach within all levels of leadership and membership base of the organizations that are already involved in our networks. We must be continually building and strengthening a base which provides our credibility, our strategies, mobilizations, leadership development, and the energy for the work we must do daily.

3. Let People Speak for Themselves
We must be sure that relevant voices of people directly affected are heard. Ways must be provided for spokespersons to represent and be responsible to the affected constituencies. It is important for organizations to clarify their roles, and who they represent, and to assure accountability within our structures.

4. Work Together in Solidarity and Mutuality
Groups working on similar issues with compatible visions should consciously act in solidarity, mutuality and support each other's work. In the long run, a more significant step is to incorporate the goals and values of other groups with your own work, in order to build strong relationships. For instance, in the long run, it is more important that labor unions and community economic development projects include the issue of environmental sustainability in their own strategies, rather than just lending support to the environmental organizations. So communications, strategies and resource sharing is critical, to help us see our connections and build on these.

5. Build Just Relationships Among Ourselves
We need to treat each other with justice and respect, both on an individual and an organizational level, in this country and across borders. Defining and developing "just relationships" will be a process that won't happen overnight. It must include clarity about decision-making, sharing strategies, and resource distribution. There are clearly many skills necessary to succeed, and we need to determine the ways for those with different skills to coordinate and be accountable to one another. 6. Commitment to Self-Transformation As we

change societies, we must change from operating on the mode of individualism to community-centeredness. We must "walk our talk." We must be the values that we say we're struggling for and we must be justice, be peace, be community.

(Southwest Network for Environmental and Economic Justice, 1996)

C. Characteristics of White Supremacy Culture

From the author: *The invitation on this and every page is to investigate how these characteristics and qualities lead to disconnection (from each other, ourselves, and all living things) and how the antidotes can support us to reconnect. If you read these characteristics and qualities as blaming or shaming, perhaps they are particularly alive for you. If you find yourself becoming defensive as you read them, lean into the gift of defensiveness and ask yourself what you are defending. These pages and these characteristics are meant to help us see our culture so that we can transgress and transform and build culture that truly supports us individually and collectively. Breathe into that intention if you can.*

A constant sense of urgency :
- makes it difficult to take time to be inclusive, encourage democratic and/or thoughtful decision-making, to think and act long-term, and/or to consider consequences of whatever action we take;
- frequently results in sacrificing potential allies for quick or highly visible results, for example sacrificing interests of BIPOC people and communities in order to win victories for White people (seen as default or norm community);
- reinforces existing power hierarchies that use the sense of urgency to control decision-making in the name of expediency;
- is reinforced by funding proposals which promise too much work for too little money and by funders who expect too much for too little;
- privileges those who process information quickly (or think they do);
- sacrifices and erases the potential of other modes of knowing and wisdom that require more time (embodied, intuitive, spiritual);
- encourages shame, guilt, and self-righteousness to manipulate decision-making;
- reinforces the idea that we are ruled by time, deadlines, and needing to do things in a "timely" way often based on arbitrary schedules that have little to do with the actual realities of how long things take, particularly when those "things" are relationships with others;
- connected to objectivity in the sense that we think that our sense of time and/or meeting deadlines is objective because we see or frame time as objective;
- reproduces either/or thinking because of the stated need to reach decisions quickly;
- makes it harder for us to distinguish what is really urgent from what feels urgent; after a while everything takes on the same sense of urgency, leading to mental, physical, intellectual, and spiritual burnout and exhaustion;
- involves unrealistic expectations about how much can get done in any period of time; linked to perfectionism in the urgency that perfectionism creates as we try to make sure something is done perfectly according to our standards.

Perfectionism shows up as:

- little or no appreciation expressed among people for the work that others are doing; when appreciation is expressed, it is often or usually directed to those who get most of the credit anyway
- more common is to point out either how the person or work is inadequate
- or even more common, to talk to others about the inadequacies of a person or their work without ever talking directly to them
- mistakes are seen as personal, i.e. they reflect badly on the person making them as opposed to being seen for what they are – mistakes
- making a mistake is confused with being a mistake, doing wrong with being wrong
- the person making the "mistake" or doing something "wrong" rarely participates in defining what doing it "right" looks like or whether a "mistake" actually occurred
- little time, energy, or money is put into reflection or identifying lessons learned that can improve practice, in other words there is little or no learning from mistakes, and/or little investigation of what is considered a mistake and why
- a tendency to identify what's wrong; little ability to identify, name, define, and appreciate what's right
- often internally felt, in other words the perfectionist fails to appreciate their own good work, more often pointing out their faults or 'failures,' focusing on inadequacies and mistakes rather than learning from them; the person works with a harsh and constant inner critic that has internalized the standards set by someone else
- linked to the characteristic of one right way, where the demand for perfection assumes that we know what perfection is while others are doing it wrong or falling short

One right way shows up as:
- the belief there is one right way to do things and once people are introduced to the right way, they will see the light and adopt it
- when a person or group does not adapt or change to "fit" the one right way, then those defining or upholding the one right way assume something is wrong with the other, those not changing, not with us
- similar to a missionary who sees only value in their beliefs about what is good rather than acknowledging value in the culture of the communities they are determined to "convert" to the right way of thinking and/or the right way of living

Paternalism shows up as:
- those holding power control decision-making and define things (standards, perfection, one right way)
- those holding power assume they are qualified to (and entitled to) define standards and the one right way as well as make decisions for and in the interests of those without power
- those holding power often don't think it is important or necessary to understand the viewpoint or experience of those for whom they are making decisions, often labeling those for whom they are making decisions as unqualified intellectually, emotionally, spiritually, or physically
- those without power understand they do not have it and understand who does

- those without power are marginalized from decision-making processes and as a result have limited access to information about how decisions get made and who makes what decisions; at the same time they are completely familiar with the impact of those decisions on them
- those without power may internalize the standards and definitions of those in power and act to defend them, assimilate into them, and/or collude with those in power to perpetuate them in the belief that this will help them to belong to and/or gain power; they may have to do this to survive

Objectivity shows up as:
- the belief that there is such a thing as being objective or 'neutral'
- the belief that emotions are inherently destructive, irrational, and should not play a role in decision-making or group process
- assigning value to the "rational" while invalidating and/or shaming the "emotional" when often if not always the "rational" is emotion wrapped up in fancy logic and language
- requiring people to think in a linear (logical) fashion and ignoring or invalidating/shaming those who think in other ways
- impatience with any thinking that does not appear 'logical' or 'rational' in ways that reinforce existing power structures; in other words, those in power can be illogical, angry, emotional without being disregarded while those without power must always present from a 'rational' position
- refusal to acknowledge the ways in which 'logical' thinking and/or decision-making is often a cover for personal emotions and/or agendas often based in fear of losing power, face, or comfort
- refusal to acknowledge the ways in which objectivity is used to protect power and the status quo

Either/or and the binary shows up as:
- Positioning or presenting options or issues as either/or — good/bad, right/wrong, with us/against us.
- Little or no sense of the possibilities of both/and.
- Trying to simplify complex things, for example believing that poverty is simply the result of lack of education.
- Closely linked to perfectionism because binary thinking makes it difficult to learn from mistakes or accommodate conflict.
- Conflict and an increased sense of urgency, as people feel they have to make decisions to do either this or that, with no time or encouragement to consider alternatives, particularly those which may require more time or resources.
- A strategy used by those with a clear agenda or goal to push those who are still thinking or reflecting to make a choice between 'a' or 'b' without acknowledging a need for time and creativity to come up with more options.
- A strategy used to pit oppressions against each other rather than to recognize the ways in which racism and classism intersect, the ways in which both intersect with heterosexism and ageism and other categories of oppression.

Defensiveness shows up as:
- The organizational structure is set up and much energy spent trying to prevent abuse and protect power rather than to facilitate the capacities of each person or to clarify who has power and how they are expected to use it.
- Because of either/or and binary thinking, those in power view and/or experience criticism as threatening and inappropriate (or rude).
- People respond to new or challenging ideas with objections or criticism, making it very difficult to raise these ideas.
- People in the organization, particularly those with power, spend a lot of energy trying to make sure that their feelings aren't getting hurt, forcing others to work around their defensiveness rather than addressing them head-on. At its worst, they have convinced others to do this work for them.
- White people spend energy defending against charges of racism instead of examining how racism might actually be happening.
- White people claim that participation in anti-racist activity means they cannot be racist or be engaged in racism; closely linked to individualism.
- White people targeted by other oppressions express resentment because they experience the naming of racism as erasing their experience; closely linked to either/or/binary thinking.
- An oppressive culture where people are afraid to speak their truth.

The right to comfort shows up as:
- the belief that those with power have a right to emotional and psychological comfort (another aspect of valuing 'logic' over emotion);
- scapegoating those who cause discomfort, for example, targeting and isolating those who name racism rather than addressing the actual racism that is being named;
- demanding, requiring, expecting apologies or other forms of "I didn't mean it" when faced with accusations of colluding with racism;
- feeling entitled to name what is and isn't racism;
- White people (or those with dominant identities) equating individual acts of unfairness with systemic racism (or other forms of oppression).

Fear of (open) conflict shows up as:
- people in power are scared of expressed conflict and try to ignore it or run from it;
- when someone raises an issue that causes discomfort, the response is to blame the person for raising the issue rather than to look at the issue which is actually causing the problem;
- emphasis or insistence on being polite; setting the rules for how ideas or information or differences of opinion need to be shared in order to be heard (in other words, requiring that people "calm down" if they are angry when anger often contains deep wisdom about where the underlying hurt and harm lies);
- equating the raising of difficult issues with being impolite, rude, or out of line; punishing people either overtly or subtly for speaking out about their truth and/or experience;

- labeling emotion as "irrational" or anti-intellectual or inferior, which means failing to recognize the importance of emotional intelligence;
- pretending or insisting that our point of view is grounded in the "rational" or the intellectual when we are in fact masking our emotions with what appear to be rational or intellectual arguments.

Power hoarding shows up as:
- little, if any, value around sharing power
- power seen as limited, only so much to go around
- those with power feel threatened when anyone suggests changes in how things should be done in the organization, often feeling suggestions for change are a reflection on their leadership
- those with power don't see themselves as hoarding power or as feeling threatened
- those with power assume they have the best interests of the organization at
- heart and assume those wanting change are ill-informed (stupid), emotional, inexperienced; blaming the messenger rather than focusing on the message
- clinging and other emotional constriction that clouds our field of vision and catapults us back into our small self with its insatiable sense of anxiety and threat

Individualism shows up as:
- for White people: seeing yourselves and/or demanding to be seen as an individual and not as part of the White group;
- failure to acknowledge any of the ways dominant identities - gender, class, sexuality, religion, able-bodiedness, age, education to name a few - are informed by belonging to a dominant group that shapes cultural norms and behavior
- for BIPOC people: individualism forces the classic double bind when BIPOC people are accused of not being "team players" - in other words, punishment or repercussions for acting as an individual if and when doing so "threatens" the team
- for White people: a culturally supported focus on determining whether an individual is racist or not while ignoring cultural, institutional, and systemic racism; the strongly felt need by many if not most White people to claim they are "not racist" while their conditioning into racism is relentless and unavoidable
- for White people: a belief that you are responsible for and are qualified to solve problems on your own
- for BIPOC people: being blamed and shamed for acting to solve problems without checking in and asking for permission from White people
- little experience or comfort working as part of a team, which includes both failure to acknowledge the genius or creativity of others on the team and a willingness to sacrifice democratic and collaborative process in favor of efficiency; see double bind for BIPOC people above
- desire for individual recognition and credit; failure to acknowledge how what we know is informed by so many others
- isolation and loneliness

- valuing competition more highly than cooperation; where collaboration is valued, little time or resources are devoted to developing skills in how to collaborate and cooperate
- accountability, if any, goes up and down, not sideways to peers or to those the organization is set up to serve
- a lack of accountability, as the organization values those who can get things done on their own without needing supervision or guidance, unless and until doing things on "our" own threatens power
- very connected to "one right way," "perfectionism," "qualified," and "defensiveness and denial"

I'm the only one shows up as:
- an aspect of individualism, the belief that if something is going to get done "right," 'I' have to do it
- connected to the characteristic of "one right way," the belief that "I" can determine the right way, am entitled and/or qualified to do so, in isolation from and without accountability to those most impacted by how I define the right way
- little or no ability to delegate work to others, micro-management
- based in deep fear of loss of control, which requires an illusion of control
- putting charismatic leaders on pedestals (or positioning yourself as a charismatic leader on a pedestal)
- romanticizing a leader (or yourself) as the center of a movement, idea, issue, campaign
- hiding or covering up the flaws of a leader (or your flaws) in fear that the organization, movement, effort cannot survive
- defining leadership as those most in front and most vocal

Progress is bigger and more shows up as:
- how we define success (success is always bigger, more)
- an organization that assumes the goal is to grow - add staff, add projects, or serve more people regardless of how well they can serve them; raise more money, or gain more influence and power for its own sake - all without regard to the organization's mission or especially the people and/or living beings that the organization is in relationship with
- gives no value, not even negative value, to its cost; for example, increased accountability to funders as the budget grows in ways that leave those served exploited, excluded, or underserved as we focus on how many we are serving instead of quality of service or values created by the ways in which we serve
- little or no ability to consider the cost of growth in social, emotional, psychic, embodied, spiritual, and financial realms
- a narrow focus on numbers (financial, people, geography, power) without an ability to value processes (relationships), including cost to the human and natural environment
- valuing those who have "progressed" over those who "have not" - where progress is measured in degrees, grades, money, power, status, material belongings - in ways that erase lived experience and wisdom/knowledge that is invisibilized - tending, cleaning, feeding, nurturing, caring for, raising up, supporting (thank you Bevelyn Ukah)

- focus on getting bigger (in size, transactional power, numbers) leading to little or no ability to consider the cost of getting big in social, emotional, psychic, embodied, spiritual, and financial realms (thank you Bevelyn Ukah)

Quantity over quality shows up as:
- most or all resources directed toward producing quantitatively measurable goals
- things that can be counted are more highly valued than things that cannot, for example numbers of people attending a meeting, newsletter circulation, money raised and spent are valued more than quality of relationships, democratic decision-making, ability to constructively deal with conflict, morale and mutual support
- little or no value attached to process in the internalized belief that if it can't be measured, it has no value
- discomfort with emotion and feelings
- little or no understanding that when there is a conflict between content (the agenda of the meeting) and process (people's need to be heard or engaged), process will prevail (for example, you may get through the agenda, but if you haven't paid attention to people's need to be heard, the decisions made at the meeting are undermined and/or disregarded)
- connected to perfectionism, one right way, I'm the only one, and right to comfort because of the ways in which process, which cannot be numerically measured, requires emotional presence and intelligence whereas product, when it can be numerically measured, feels "safe" and controllable
- short-term thinking, urgency thinking, either/or thinking in the consuming effort to meet often unrealistic quantitative goals (numbers)

Worship of the written word shows up as:
- if it's not in a memo, it doesn't exist
- if it's not grammatically "correct," it has no value
- if it's not properly cited according to academic rules that many people don't know or have access to, it's not legitimate
- an inability or refusal to acknowledge information that is shared through stories, embodied knowing, intuition and the wide range of ways that we individually and collectively learn and know
- continued frustration that people and communities don't respond to written communication; blaming people and communities for their failure to respond
- those with strong documentation and writing skills are more highly valued, even in organizations where ability to relate to others is key to the mission
- those who write things down get recognized for ideas that are collectively and generationally informed in a context where systemic racism privileges the writing and wisdom of people in the White group
- academic standards require "original" work when our knowledge and knowing almost always builds on the knowledge and knowing of others, of each other

- claiming "ownership" of (written) knowledge to meet ego needs rather than understanding the importance of offering what you write and know to grow and expand the community's knowing

Antidotes to each are offered at the author's website https://www.whitesupremacyculture.info/ (Okun, 2021).

D. Resources from EPA, FEMA, and NOAA

Climate Program Office (CPO), Regional Integrated Science and Assessments (RISA) FY2022

DECLARATION OF PRINCIPLES FOR PARTNERSHIP RESEARCH

"Drought isn't just water, it is living": Narratives of drought vulnerability in California's San Joaquin Valley

Uncovering climate (in)justice with an adaptive capacity assessment: A multiple case study in rural coastal North Carolina

Contextualizing climate science: applying social learning systems theory to knowledge production, climate services, and use-inspired research

Ready & Resilient: Climate Preparedness in Saint Paul, Minnesota

E. Summary of Best Practices

A final summary of the main points for belonging, equity, justice, diversity, and inclusion-centered climate resilience planning and action:
- Community-derived visions are at the core
- Community-driven co-design that advances a culture of democratic engagement
- Engages all members of the community, including youth, older adults, differently abled people, LGBTQ+, low-income people
- Assesses local/community assets and vulnerabilities
- Includes BEJDI and resilience indicators
- Includes racial/gender/economic justice analyses that address systemic issues that contribute to disproportionate climate impacts.
- Budget transparency, advances the new economy, includes community-based financing
- Includes both infrastructure-related indicators and human impacts
- Puts forth comprehensive solutions that address the root causes of climate vulnerability
- Provides place-based adaptation solutions
- Includes aspirational goals that will result in true resilience, for example: security for all with respect to housing, food, energy, and water.

(Kennedy et. al., 2019)

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