

CLIMATE CHANGE AND SOCIAL EQUITY GUIDANCE DOCUMENT - DRAFT

City and County of Honolulu, Climate Change Commission

PURPOSE

Pursuant to the Revised Charter of Honolulu (“RCH”) Section 6-107(h), the City and County of Honolulu (“City”) Climate Change Commission is charged with gathering the latest science and information on climate change impacts to Hawai‘i and providing advice and recommendations to the mayor, City Council, and executive departments as they look to draft policy and engage in planning for future climate scenarios and reducing Honolulu’s contribution to global greenhouse gas (GHG) emissions.

The purpose of this guidance document is to:

- Define social equity in the context of climate change
 - Explain the importance of social equity in the context of climate change mitigation and adaptation policies
 - Begin to identify conditions that create resiliency and vulnerability on O‘ahu
 - Provide key findings and recommendations for local leadership to inform equitable decisions with regard to climate mitigation and adaptation initiatives.
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1. EXECUTIVE SUMMARY

1.1. KEY FINDINGS¹

- Climate change is a cross-cutting threat that will expose weaknesses in all societal systems. All areas of the community will be impacted, including but not limited to education, energy, employment, healthcare, housing, mobility, transportation, and public spaces. Climate change will push physical systems to be inundated by higher seas and increased precipitation, propelled beyond their design limits, and sometimes even destroyed.²
- The failure of including potentially affected groups within the decision-making process may result in a “double injustice,” where disadvantaged groups who contributed the least to global carbon emissions are simultaneously being excluded from the benefits of climate adaptation and mitigation policies.³ For example, initiatives promoting renewable energy (a climate mitigation measure) have the potential to benefit high-income households but not low-income households.⁴
- Given the uncertainty of federal funding for disasters and climate change, as well as the uninsurance or underinsurance of property nationwide, the inequality gap is likely to widen without immediate implementation of intentionally equitable, well-planned, and well-funded climate adaptation and mitigation projects.⁵

1.2. RECOMMENDATIONS⁶

1. **Center Social Equity in All City Climate Change Adaptation and Mitigation Plans.** Analyze the distributional impacts of all climate policies and articulate how such policies will benefit all.⁷ In coordination with the City’s Office of Climate Change, Sustainability and Resiliency (CCSR) Climate Resilience and Equity Program, continue to improve facilitating access, agency, and advocacy with communities to increase participation and representation in programs, projects, and policies throughout and between City initiatives, and provide equity training for City departments.
2. **Identify frontline communities that potentially have, are, or will be experiencing chronic stressors in relation to climate change-induced shocks.** Collect comprehensive data that demonstrates the conditions that create or exacerbate vulnerabilities and can identify communities of concern.⁸
3. **Review O’ahu’s Ola Resilience Strategy to determine areas that include equity components and where additional focus on equity is needed.** Measure the actions outlined in the resilience strategy with indicators to inform the community on progress towards sustainability, including the reduction of disparities among demographic groups, using the City of Boston’s equity plan as an example.⁹ Part of this process will be reviewing existing data and working in collaboration with individuals, organizations, and offices that have expertise in working with existing inequalities and vulnerable populations in O’ahu.
4. **Collaborate with communities to share resources and information about community risks, needs, and abilities.** Encourage holistic, community-scale approaches to building resilience by partnering with communities, nonprofits, allied professionals, and technical experts to identify and communicate about areas of high-risk.¹⁰
5. **Focus on outreach to underserved communities through expanding accessibility options and providing information in the preferred format and languages of our diverse communities.** Implement inclusive actions such as increasing collaborative relationships with community-based organizations, creating easy to understand content about climate change through appropriate channels, holding meetings

in locations and virtual platforms that are publicly accessible, and providing translated documents as needed.¹¹

1.3. CLIMATE CHANGE COMMISSION PLEDGE TOWARDS EQUITY

The Commission acknowledges that climate change is still viewed as primarily an environmental issue, and thus needs to be reframed as a human issue that is a core challenge for sustainable development with powerful economic, social, and environmental implications.¹² The Commission acknowledges the need to understand the different ways that people are vulnerable to the consequences of climate change events by virtue of their geographic locations, livelihoods, asset holdings, historical contexts, and social positioning.¹³ As O‘ahu plans for climate change impacts, we explore to what extent may mitigation or adaptation strategies offer opportunities simultaneously to promote wider societal development objectives.¹⁴

Understanding that change begins with leadership, the Climate Change Commission of the City and County of Honolulu pledges to:

- Host the Commission’s in-person meetings in different areas of the island of O‘ahu so that a diversity of communities can participate in the planning process for their communities, and to invite leaders of underrepresented communities to participate
- Integrate social equity considerations, as defined by the 2014 Urban Sustainability Directors Initiative (USDN) Report, into all its publications and policies; and
- Provide diverse platforms and opportunities such as virtual and in-person meetings, focus groups, surveys, field trips, and presentations, to prioritize communities/groups that have historically been marginalized or underrepresented.

2. INTRODUCTION

While climate impacts are being experienced globally, they will not be experienced equally.¹⁵ The impacts of climate change will pose the greatest threats to frontline communities, which are typically those who have the fewest resources to respond or are the most socially and politically marginalized.¹⁶ This is true today and will be for many decades to come, with future generations who have no representation and have not contributed to the problem likely to be most affected.¹⁷

The City and County of Honolulu Climate Change Commission acknowledged in its Climate Brief adopted in June 2018 that: ***The negative impacts of climate change fall disproportionately on disadvantaged groups in a type of “vicious cycle.” Initial inequity or vulnerabilities can be exacerbated by climate change, and thus it is important to recognize and resolve the impacts of climate change on vulnerable populations as the City pivots to meet the challenges of climate change.***¹⁸

The unequal impacts of natural disasters have been observed in recent events such as Hurricane Harvey, Hurricane Sandy, and Hurricane Maria, which led to the social costs of mortality, illness, and the displacement of thousands of people, as well as economic costs to municipal governments of billions of dollars. Recently, climate change impacts that impacted specific communities on O‘ahu more than others include the “rain bomb” and consequent flooding damage in east O‘ahu (2018)¹⁹, and wildfires on unused grassy agricultural areas in West O‘ahu (2018 and 2019)²⁰. The City and County of Honolulu must take bold steps to ensure that our climate and resilience policies and processes are equitable because we are already seeing the effects of climate change in Hawai‘i and will continue to do so, and these impacts threaten the health and welfare of our citizens.²¹ By making social equity a priority and not an afterthought, we can help to create a society in which everyone, not just a select few, thrives. This in turn will preserve the culture, traditions, and neighborhoods that we value and make O‘ahu livable and unique.

There are three key dimensions of equity in the global climate debate, which are: 1) the responsibility for greenhouse gas emissions; 2) the disproportionate nature of vulnerability to climate impacts; and 3) the need to support the ability for countries to develop in the face of climate change.²² Wealthier nations tend to have substantially greater per capita carbon dioxide (CO₂) emissions than developing nations. However, the developing world will suffer the negative impacts of climate change the most.²³ The United States has the second largest carbon emissions after China, and Hawai'i's CO₂ emissions per capita are close to the national average.²⁴ Hawai'i outpaces several major economies in carbon emissions on a per capita basis, emitting more than twice the amount as China and seven times the amount of India.²⁵

Across the United States, cities such as Baltimore, Portland, and Atlanta have historically implemented laws and policies that excluded specific groups from neighborhoods with better access to jobs, transit, and amenities.²⁶ Although such overt discriminatory practices are illegal today, limitations on multi-family dwellings, affordable homes, group homes for persons with disabilities, and similar housing opportunities for underserved people continue to perpetuate exclusionary practices.²⁷ Unequal access to resources, poverty, poor infrastructure, lack of representation, and inadequate systems of social security, early warning, and planning contribute to a community's vulnerability to climate-related shocks and stresses.²⁸ Many cities such as San Francisco, Seattle, Boston, and Los Angeles are now making equity central to their climate change, disaster, and resilience planning.

The purpose of this guidance document is to define, highlight and incorporate social equity considerations in the context of the City's climate-related policies. In April 2019, the City and County of Honolulu released [Ola: O'ahu's Resilience Strategy](#), in partnership with [100 Resilient Cities](#) (100RC), supported by the Rockefeller Foundation. The strategy provides 44 specific, concrete actions to address long-term affordability and climate change impacts. This guidance document intends to supplement this strategy and other City plans by providing guidance on what social equity and fairness can mean in the context of climate change adaptation and mitigation policy and planning.

2.1. DEFINING SOCIAL EQUITY & VULNERABILITY²⁹

WHAT IS SOCIAL EQUITY?

In a changing climate, social equity is creating, promoting, and incorporating equal and fair policies and opportunities for all to be healthy, happy, and prosperous. Everyone deserves access to clean air and water as well as opportunities to reduce their own carbon footprints through intentional and equitable mitigation policies.

URBAN SUSTAINABILITY DIRECTORS NETWORK DEFINITION OF EQUITY

In their 2014 report *Equity in Sustainability*, the USDN defines equity through four components: distributional, procedural, structural, and transgenerational.

- **Distributional Equity** - sustainability programs and policies resulting in fair distributions of benefits and burdens across all segments of a community, prioritizing those with highest need.
- **Procedural Equity** - inclusive, accessible, authentic engagement and representation in processes to develop or implement sustainability programs and policies.
- **Structural Equity** - decisions are made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantage for subordinated groups.
- **Transgenerational Equity** - decisions consider generational impacts and do not result in unfair burdens on future generations.

DEFINING VULNERABILITY

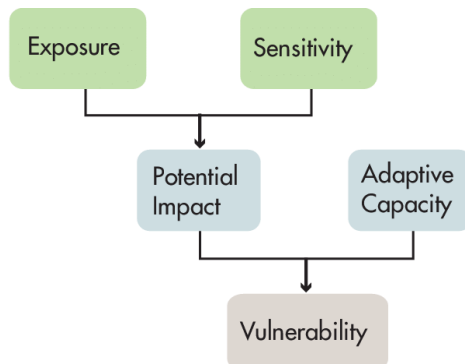


Figure 1. Relationship among the three major components of vulnerability: exposure, sensitivity, and adaptive capacity.

- “Vulnerability” in this document is a function of exposure, sensitivity, and adaptive capacity (Fig. 1).¹ Sensitivity includes the ability of a community to withstand exposures and associated impacts and factors that increase the susceptibility of individuals to the exposure.¹ Sensitivity may also refer to access to resources, (e.g. infrastructure) that can influence how people withstand an exposure.¹
- Adaptive capacity refers to behavioral, institutional, and technological responses and adjustments to lessen the potential impact, limit damages, provide recovery opportunities, and enhance effective coping with consequences.
- Developing the capacity to implement strategies that avoid stress or reduce system sensitivity can minimize vulnerability.

2.2. SOCIAL EQUITY IN CLIMATE MITIGATION & ADAPTATION POLICIES

Climate mitigation and adaptation policies are intertwined with broader equity issues involving livelihoods, health, food security, and energy access.³⁰ Climate change mitigation policies are those that aim to decrease GHG emissions to slow down global warming.³¹ Climate change adaptation policies are those that aim to adapt to physical impacts of climate change.³²

- In the short-term, the largest impact on low-income households may result less from the changing climate than from policies adopted to mitigate climate change. Thus, managing the potentially adverse consequences of climate change policies is crucial.³³
- At-risk communities need to be included in the planning processes to ensure that climate mitigation and adaptation policies address their needs. Low-income households may not be able to participate in formal decision-making and power structures, which can translate to less access to pertinent information regarding risks and preparedness.³⁴
- Equity-centered climate mitigation policies are ones that focus on lessening inequities. These inequities have been found to largely depend on contextual factors, policy design, and implementation.³⁵
- Similarly, climate adaptation policies that focus on equity should address the needs of the populations that have been made the most vulnerable.³⁶

Below is a summary of some commonly used planning strategies that address issues of social equity recommended in various reports from local, regional, and global organizations (Table 1). More detailed descriptions of each mentioned report can be found in the appendix of this document.

Table 1. Common strategies and recommendations found in various social equity reports

Social Equity Plans							
Common strategies in various equity plans (most common to least common)		University of California (2019)	American Planning Association (2019)	Urban Sustainability Directors Network (2014)	World Resources Institute (2014)	United Nations (2011)	World Bank (2010)
Build capacity & authentic community engagement		X	X	X	X	X	X
Focus adaptation and loss on the most vulnerable populations		X			X	X	X
Connect equity with public health and environmental justice		X	X	X			
Connect equity with public health and environmental justice		X	X	X			
Collect comprehensive data to identify communities of concern				X		X	X
Institutionalize equity in local government			X	X			

	Provide adequate and targeted finance to build capacities				X		X
	Develop & deploy innovative technology	X			X		
	Strengthen transparency & accountability	X			X		
	Establish equitable long-term mitigation goal	X			X		

3. SOCIAL EQUITY IN HAWAI'I AND THE O'AHU CONTEXT

Hawai'i has already been experiencing climate change impacts such as increasing heat, heavy rainfall, prolonged droughts, flooding, sea level rise, and coastal erosion, which directly affects its diverse communities.³⁷ Climate change may worsen social and economic well-being over time, particularly in O'ahu's social context that includes:

- Honolulu has the highest cost of living in the United States³⁸ and nearly half of O'ahu's population lives from paycheck to paycheck, which may limit these households' ability to adequately prepare for disasters, participate in the planning process, or invest in more sustainable options.³⁹
- Honolulu residents earn the lowest wages compared to other U.S. cities when adjusted for the cost of living and at the same time face some of the heaviest housing cost burdens in the country.⁴⁰
- According to the U.S. Centers for Disease Control (CDC), O'ahu's Social Vulnerability score is 0.6053, which indicates a moderate-to-high level of vulnerability to shocks and stresses.⁴¹

3.1. IDENTIFYING FRONTLINE COMMUNITIES IN O'AHU

A "frontline community" in this document is defined as a group that is geographically, physically, socially, or economically at-risk due to climate change impacts. More specifically, frontline communities tend to suffer first and worst from climate impacts and extremes due to decades of underinvestment and systemic injustices, leaving these communities with disproportionately high costs for energy, transportation, and other services.⁴² Some climate-related hazards that can increase the vulnerability of a community include extreme heat, sea level rise, saltwater intrusion, increased flooding, droughts, and extreme precipitation and wind.⁴³ We acknowledge that vulnerability is context-specific, so groups may be vulnerable in some situations and not others.

Some frontline communities on O'ahu include those that have the following characteristics:⁴⁴

- Reside in high-risk areas such as flood zones, urban heat islands, or rural areas;
- Have limited physical or transportation-related mobility which could impede their movement out of hazardous areas;
- Have limited or no access to different sources of information, reducing knowledge about potential hazards or available resources;
- Are low-income households, which could limit their ability to relocate, access to transportation, or purchase insurance and disaster preparedness supplies;
- Are homeless or transient and are unable to take adequate shelter during a hazardous event;
- Are renters with little to no access to insurance or alternative housing options in the event of a disaster;
- Are immigrants or non-native-English speakers and may not be familiar with relevant local policies, laws, and programs;

- Are under the age of 18 and are reliant on their caregivers for support, and are unable to participate in the political process but will be directly affected by the policies that are implemented;
- Have pre-existing health conditions such as asthma or heart disease and are more susceptible to worsening health impacts due to climate change.⁴⁵

Climate change and extreme weather events can negatively impact human health through direct and indirect exposure.⁴⁶ Direct exposures such as flooding, extreme heat, and other natural disasters can cause illness and injury among individuals.⁴⁷ Indirect exposures induced by climate change such as an increase in mosquito populations, pollen production, and air pollution caused by fires can also cause illness among individuals.⁴⁸ Table 2 summarizes both social vulnerabilities and physical climate hazards in Hawai'i .

Table 2. Overview of Social Vulnerability Factors, Relationship to Climate Change and Hazard Events, and Related Indicators for Hawai'i – 2013 (from Hudson, 2016)

Factor	Relationship to Climate Change and Hazard Events	State of Hawai'i Indicators
Age	<ul style="list-style-type: none"> • Children and elderly populations demonstrate greater vulnerability to a range of hazards. Individuals 65 years and older, children and adolescents and infants (1 year of age or less) are particularly vulnerable to heat-related stress and poor air quality. • Age also influences the ability for individuals to move out of harm's way during hazard events with elderly and people under 18 experiencing increased vulnerability. • Low-income individuals tend to lack the resources needed to respond and recover from hazard events. For example, these individuals are less likely to have a vehicle to use to evacuate during certain hazard events. 	<ul style="list-style-type: none"> • 15.6%: percentage of persons 65 years of age and over • 21.9%: percentage of persons under 18 years of age • 6.5%: percentage of persons under 5 years of age
Income	<ul style="list-style-type: none"> • Low-income individuals tend to lack the resources needed to respond and recover from hazard events. For example, these individuals are less likely to have a vehicle to use to evacuate during certain hazard events. • Individuals living in poverty often live in substandard housing, and lack insurance and social safety nets. 	<ul style="list-style-type: none"> • \$29,305.00: Per capita money income in past 12 months (2013 dollars) • \$67,402.00: Median household income (2013 dollars) • 11.2%: percentage of persons below poverty level
Race & Ethnicity	<ul style="list-style-type: none"> • Minority populations are disproportionately impacted by hazard events because they often tend to experience greater socioeconomic disparities as compared to others. This correlates with factors such as lower income, limited access to transportation, poor housing quality and lack of insurance. • Residential areas with high concentrations of racial and ethnic minorities also tend to be located in high hazard areas. Language and cultural barriers can also serve to limit access to post-disaster funding. 	<ul style="list-style-type: none"> • 2.3%: Black or African American • 0.4%: American Indian and Alaska Native alone • 37.7%: Asian alone • 10%: Native Hawaiian and Other Pacific Islander alone • 23.1%: Two or More Races • 9.8%: Hispanic or Latino • 17.9%: Foreign born persons • 25.4%: Language other than English spoken at home, % age 5+
Vulnerable Occupations	<ul style="list-style-type: none"> • Jobs that involve working outdoors, such as farming, landscaping and construction, are more likely to be exposed to specific hazards, including heat stress 	<ul style="list-style-type: none"> • 26,030: Employment in Construction and Extraction Occupations. • 1,420: Employment in Farming, Fishing and Forestry Occupations (does not include self-employed or seasonal workers)
Behavior & Attitudes	<ul style="list-style-type: none"> • Risk perception and self-perception influence vulnerability and resilience. Individuals may perceive themselves as more or less vulnerable to hazard events, which influences their behavior. In particular, this can influence both individual and community preparation, response and long-term recovery from hazard events. 	<ul style="list-style-type: none"> • 58%: Approximate percentage of public health professionals were "very concerned" about the potential impacts of Climate Change on health on Hawai'i residents or felt that it was the number one health issue today. • 66% Approximate percentage of public health professionals felt that the impacts of Climate Change on health in Hawai'i received "little or no attention".

3.2. INDIGENOUS PACIFIC ISLAND COMMUNITIES ARE DISPROPORTIONATELY IMPACTED BY CLIMATE CHANGE DUE TO HISTORICAL GOVERNANCE STRUCTURES

Indigenous peoples of Hawai'i and the Pacific are threatened by rising sea levels, diminishing freshwater availability, and altered ecosystem services.⁴⁹ According to best practices identified by the USDN, decisions should be made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantages for subordinated groups.

- Ocean acidification and drought, in combination with pollution and development, are negatively affecting fisheries and ecosystems, directly impacting the livelihood security of Pacific communities.⁵⁰
- Indigenous populations will be disproportionately impacted by climate change due to their strong ties to place and greater reliance on natural resources for sustenance.⁵¹
- Sea level rise impacts on traditional and customary practices (including fishpond maintenance, gathering of salt, and harvesting from the nearshore fisheries) have been observed.⁵²
- Climate change impacts, such as reduced streamflow, sea level rise, saltwater intrusion, and long periods of drought, threaten the ongoing cultivation of taro and other traditional crops.
- This food security threat to Native Hawaiians can lead to an increased dependence on imported food that is of less nutritional value, which is a public health concern for Hawai'i and other parts of the Pacific Islands as Pacific Islanders have the highest rates of obesity and chronic diseases, such as diabetes, in the Pacific region.⁵³
- Native Hawaiians have the highest poverty rates in Hawai'i for individuals and families.⁵⁴
- Native Hawaiians are disproportionately represented in the island's incarcerated,⁵⁵ homeless,⁵⁶ low-income,⁵⁷ and high school dropout rates.⁵⁸
- The vulnerability of Waikīkī's location not only impacts structural assets such as hotels, but cultural assets as well. In Hawai'i, between 2011 and 2015, an annual average of 37,386 Native Hawaiians worked in tourism-intensive industries; based on the 2013 U.S. census, this number represents 12.5% of the Native Hawaiian population.⁵⁹
- The Wai'anae Coast is home to a large percentage of Native Hawaiians and other Pacific Islanders, representing approximately 39% of the area's population.⁶⁰ Meanwhile, eleven of the eighteen waste facilities and power plants on the island of O'ahu are located there.⁶¹ Numerous studies reflect increases in risk of adverse health effects (low birth weight, birth defects, certain types of cancers) for communities near landfill sites.⁶²
- What about wind power? Alternative energy on North Shore impacting communities? Also how solar farms might be impacting farmers on the West side..

3.3. SOCIAL EQUITY IN O'AHU'S CLIMATE ACTION PLAN

The City's Climate Action Plan (CAP) was developed between 2018-2020 with participation from the public, with 672 participants in eleven community meetings, 760 respondents to the island-wide representative survey, and 614 participants in the virtual open house, for a total of 2,046 participants.⁶³ Results showed that participants prioritized distributional and procedural equity in their interventions. With regard to distributional outcomes, community input showed concern that certain climate actions might disproportionately affect low-income households, particularly in the transportation sector. For example, some participants recommended that revenues from a gas tax increase be used towards advancing equitable solutions such as improving island-wide transit, while others opposed the increase outright. Feedback also emphasized the need for adequate time to adjust to new policies - for example, ensuring that viable multimodal transportation options are available before increasing parking costs.

Regarding procedural equity, virtual open house participants voiced the importance of meaningful proactive community engagement. There was strong support for a well-planned, integrated, diverse, and stepwise transition to renewable energy, but also concerns regarding the impact of large-scale renewable energy infrastructure on land use and surrounding communities, such as the wind farms in Kahuku. Discussions demonstrated that while communities

largely support climate change mitigation policies, minimizing negative consequences and ensuring equitable distribution of both positive and negative outcomes is critical.

3.4. SOCIAL EQUITY FOCUS GROUP FINDINGS

In October 2020, the Commission, in coordination with CCSR's Climate Resilience and Equity Program, convened a virtual focus group representing frontline community organizations and individuals on O'ahu to obtain perspectives regarding climate change impacts and policies in the communities they serve. The sectors represented in this focus group included health, agriculture, education, human services, cultural resources, and environmental sustainability. Among this group, climate change impacts of particular concern included sea level rise, flooding, extreme precipitation and weather events, freshwater availability, and wildfires. These impacts were identified as leading to reduced food security and the loss of cultural resources such as traditional crops, limu (i.e. seaweed), and fishponds. The focus group also expressed concern over inadequate infrastructure in the case of disaster events, such as emergency shelters and emergency roads to quickly leave vulnerable areas, particularly along the Wai'anae Coast.

While the focus group acknowledged the significance of climate change on the environment, the group also discussed the impacts of climate change as they related to socioeconomic issues. For the communities the organizations serve, the up-front costs of upgrading to sustainable or resilient systems are often out of reach (such as solar panels or converting septic systems). Additionally, the frontline organizations noted that they were often competing against each other for limited financial resources, as opposed to collaborating to increase the reach of the resources they had, and suggested that future climate initiatives could foster an integrated and collaborative, rather than competitive, environment. Because many of these frontline organizations must urgently address the immediate needs of the populations they serve, they are not able to participate as actively as desired in decision making processes that impact their communities. The barrier to actively participate also has to do the lack of resources invested into community engagement that do not currently meet the needs of frontline leaders and communities.

Climate change was also perceived as often being presented as an abstract issue that is not included in standard educational curricula, leading to a lack of understanding of its effects and implications. A need that was identified included the dissemination of small bits of easy-to-understand information through formal channels such as schools as well as through informal channels such as social media (e.g. Instagram) and other content sharing platforms (e.g. YouTube). Lastly, the focus group identified the need to bridge the divide between economic disparity and climate change through the development of a green workforce that would pay livable wages and empower young people while approaching climate change planning in a holistic way.

4. AREAS FOR FURTHER RESEARCH

- Although the O'ahu Ola Resilience Strategy emphasizes the importance of equity, its focus is mostly on addressing the needs of low-income households. Meanwhile, there are other groups that experience vulnerabilities that have not yet been identified, and more comprehensive data collection is needed to better identify these groups and potential climate change impacts to these communities.
- Appropriate tools and resources are needed to better reach communities that have been made especially vulnerable to the impacts of climate change. Better collection of relevant data will allow the City better reach these communities more effectively and efficiently.
- Other cities in the U.S. and abroad are paving the way in integrating distributive, procedural, structural, and transgenerational equity considerations into climate change policies. The Commission recommends more resources to be allocated so that the City can learn more about these cities' experiences.

5. CONCLUSION

The Commission commends the City and CCSR for establishing social equity as a key component in effectively addressing climate change adaptation and mitigation planning and policies. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change stated that, “Social justice and equity are core aspects of climate-resilient development pathways that aim to limit global warming to 1.5 °C as they address challenges and inevitable trade-offs, widen opportunities, and ensure that options, visions, and values are deliberated, between and within countries and communities, without making the poor and disadvantaged worse off.”⁶⁴

The Commission acknowledges the work that CCSR’s Climate Equity and Resilience Program has already done in facilitating access, agency, and advocacy with O’ahu’s diverse communities to promote social equity, with the understanding that this work is challenging as it involves groups that have disproportionately experienced, or will experience, impacts from climate change or extreme weather events. At times, addressing equity issues means uncomfortable discussions around race, privilege, gender, property and land rights, access, and power.⁶⁵

6. ACKNOWLEDGEMENTS

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7. APPENDIX – RECOMMENDATIONS FROM VARIOUS REPORTS

- 7.1. City of Boston, *Carbon-Free Boston Social Equity Report* (2019)
- 7.2. Urban Sustainability Directors’ Network (USDN), *Equity in Sustainability Report* (2014)
- 7.3. American Planning Association, *Planning for Equity Policy Guide* (2019)
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7.1. APPENDIX:

Carbon-Free Boston Social Equity Report Recommendations

1. Include Socially Vulnerable Communities (SVC) in Decision Making. Enables SVCs to have influence over critical decisions and processes, access to information and resources, and provides the ability to contribute more fully and effectively.

2. Set Priorities in the Context of Interactions Among Policies, Prioritizing the order and timing of policy implementation in ways that seek to avoid potential pitfalls is necessary to reduce negative impacts on socially vulnerable communities and all Bostonians

3. Focus Workforce Development Efforts on Job Quality. The benefits of job creation are enhanced by a commitment to job quality, including living wages and benefits and job health and safety standards, to ensure that workforce development is beneficial for all Bostonians

4. Training Today and Tomorrow's Workforce for Green Careers. Bostonians need green career training throughout their career pathways, from high school to four-year colleges and continuing education, that provides the new skills and knowledge to capitalize on the opportunities that arise on the path to carbon neutrality.

5. Sustainability Education for All. Public outreach and education to provide all Bostonians with the knowledge, skills, and opportunities needed for sustainability are critical to successfully and inclusively implementing carbon-neutral strategies.

6. Avoid Displacement. Intentional design and inclusive decision making will avoid or reduce the displacement of Boston's most socially vulnerable households and communities.

7. Increase Access to Credit and Community Wealth. Action that builds community wealth and makes gains in individual household wealth accessible to as many Bostonians as possible will increase access to energy efficiency and clean fuels and electricity.

8. Allow for/Prioritize Neighborhood Planning for Equity and Sustainability. Bostonians need green career training throughout their career pathways, from high school to four-year colleges and continuing education, that provides the new skills and knowledge to capitalize on the opportunities that arise on the path to carbon neutrality.

9. Address Historical Disparities in Transportation Equity. Changes in the transportation sector are an opportunity to make public, private and active modes of transit work—and work better—for all Bostonians, particularly those facing barriers to access.

10. Improve Energy Security and Access to Clean Energy. Access to affordable, clean fuels and electricity reduces GHG emissions and has wide-ranging benefits to socially vulnerable communities.

Carbon-Free Boston Equity Report Scorecard Example

Equity Considerations: Retrofit and Electrify Existing Buildings	
Key Questions	Considerations: does the strategy/is the strategy...?
Is it green?	
Is it GHG-free?	Depends: Delivers net-zero emission buildings over time when paired with 100% clean energy policies
Is it environmentally sustainable?	Yes: Enhances energy efficiency of buildings every year; reduces emissions associated with fuel combustion and harmful co-pollutants caused by fuel combustion
Does it promote smart behavior?	Depends: With intentional design, energy efficiency measures and electrification can facilitate integration with grid and shave peak demand; smart thermostats, appliances, and building design, together with behavioral changes, can reduce and improve building energy use, and give owners and occupants more control over their space
Is it fair?	
Is it accessible?	Depends: Deep reductions in energy use and electrification of thermal services may not be accessible to all; pairing this policy with subsidies, tax credits or rebates as well as a broad and accessible strategic communications strategy to address cultural and language differences offer a partial solution
Is it affordable?	Depends: While electrification of thermal services and deep reductions in energy use lower energy costs and customer bills, associated capital costs may not be affordable to all, even with financing mechanisms; pairing this policy with exemption options, public funding, and additional renter protections offers a partial solution
Are workforce opportunities just?	Depends: Opportunities for substantial local, diverse workforce development depend on policy design; careful planning will be necessary to identify training opportunities that expand this workforce beyond those with existing technical qualifications
Who gets to decide?	
Is it inclusive?	Depends: Opportunities for inclusive decision making with intentional planning and prioritization; decision-making processes need to include renters as well as property owners
Are values considered?	Depends: Opportunities for values-based decision making with intentional planning and prioritization
Is it measurable?	Depends: Easy measurement for energy usage, dollars, number of furnaces and boilers replaced, number of buildings addressed; more difficult for community and workforce impacts

7.2. APPENDIX:
USDN Equity Scan Report
Recommendations

1. **FRAMING AND COMMUNICATION:** Integrate Equity Into Framing And Communication Of Sustainability
 - a. Define sustainability proactively beyond “green,” fully integrating equity and economy and a triple-bottom line approach
 - b. Connect the language and principles of environmental justice and public health to sustainability whenever possible
 - c. Put demographics and equity implications front and center
2. **DATA, METRICS, AND ANALYSIS:** Use data, metrics, and analysis to set goals and build accountability for progress on equity
 - a. Collect comprehensive sustainability data that fully integrate equity, then disaggregate that data to identify communities of concern
 - b. Use indicators to inform the community on progress towards sustainability, including the reduction of disparities among demographic groups
3. **COMMUNITY ENGAGEMENT, CAPACITY BUILDING, AND COLLABORATION:** Build sustainability efforts on a foundation of community engagement, ongoing capacity building, and collaboration
 - a. Build sustainability programs on a foundation of authentic community engagement
 - b. Provide learning opportunities on the basics of planning and sustainability, including developing capacity and leadership in neighborhoods prioritized for engagement
4. **LOCAL GOVERNMENT CAPACITY AND INFRASTRUCTURE:** Expand the capacity and infrastructure for equity in local government decision-making and operations
 - a. Build an infrastructure of people and entities tasked with achieving progress on equity in sustainability and foster collaboration across agencies and beyond

- b. Provide professional development to cultivate the awareness, knowledge, and skills to effectively address equity within local government
- c. Develop implementation tools and processes to institutionalize equity and increase accountability in decision-making, budgeting, and programs

7.3. APPENDIX:

American Planning Association's Planning for Equity Policy Guide (Climate Change Section)
Recommendations

1. **Partner With Communities to Exchange Information About Community Risks.** Encourage community-scale approaches to building resilience by partnering with communities, allied professionals, and technical experts to identify and communicate about areas of high risk. Respect and draw upon wisdom from communities in conjunction with best available demographic and multi-hazard data to identify the populations that are most vulnerable. Examples include Climate Ready D.C.⁴⁸ and Flood Help NY.⁴⁹ Focus on outreach to underrepresented communities in planning processes through intentionally inclusive actions such as maintaining strong relationships with community-based organizations, holding meetings in locations that were universally designed, and providing translated documents.
2. **Empower Communities Through Community-Based Participatory Planning.** Work with communities to make informed decisions together about how to manage and reduce risks while enhancing resilience, empowering community resilience by establishing representative community-based equity planning committees and processes that link technical experts to communities, and investing in community-driven hazard, vulnerability, and risk assessments.⁵⁰ Draw upon lessons learned from the community-based participatory planning process while developing hazard mitigation plans⁵¹ that may reduce the loss of life and property by lessening the impact of disasters.
3. **Fund Adaptation and Mitigation Projects Identified by Communities in Community-Based Recovery and Resiliency Plans.** Honor the knowledge and expertise of local communities by working together to identify, plan for, support and prioritize the funding of community interventions that reduce risks and address underlying, pre-existing community vulnerabilities. Use an equity lens to identify the unintended consequences and cost burden implications of strategies meant to increase resiliency, such as requiring costly seismic retrofits to historic buildings, buildings owned by people of color and buildings owned by

those without access to funding to make improvements. Communicate the value of long-term resilient action, including managed retreat where necessary. Target disaster recovery funds at mitigation efforts that incorporate equity thinking into Community Development Block Grant-Disaster Recovery funding appropriations and poverty eradication efforts for disaster-affected households that may be experiencing repetitive losses. Better account for hazard mitigation actions taken as they relate to the National Flood Insurance Program's Community Rating System.

4. **Prioritize Equitable Procurement of Planning Services that Build the Capacities of Disadvantaged, Minority-Owned, and Women-Owned Firms and Planners of All Protected Classes in Climate Change Adaptation and Mitigation Projects.** Establish policies that prioritize equitable procurement of planning services that build the capacities of disadvantaged, minority-owned, and women-owned firms and planners of all protected classes to lead climate change adaptation and mitigation projects. This capacity building is essential for all communities to achieve long-term climate resilience. Equity in climate policy is not just about what is planned, but who does the planning work and how that contributes to the creation of a more diverse and inclusive profession that reflects the communities it serves.
5. **Consider Social Equity in All Climate Change Adaptation and Mitigation Decisions.** Consider the co-benefits of climate change adaptation and mitigation decisions and actions. Employ an equity lens to critically analyze the distributional impacts of adaptation and mitigation measures in terms of incomes, jobs, and resources given the wealth inequality pervasive in the U.S. Evaluate through the lenses of diversity and inclusion to understand who pays for the adaptation and mitigation measures and who benefits most from them
6. **Include Equity as a Consideration in Benefit-Cost Analyses.** Support the expansion of traditional cost-benefit analysis to include qualitative social equity considerations, as well as quantitative metrics driven by demographic analyses and data. Foster global partnerships with planners and policy makers in Europe and elsewhere to identify opportunities to embed social equity into Benefit-Cost Analysis

7.4. APPENDIX:

World Resources Institute - Building Equity Report Recommendations

1. Focus adaptation and loss and damage on the most vulnerable populations

A capabilities approach highlights the role that well-designed adaptation policies can play in protecting and improving the long-term well-being and livelihoods of vulnerable populations. The 2015 Agreement should include a collective goal focused on building the resilience of the most vulnerable populations. Given the increasing importance of loss and damage and the need to develop a response that is robust, consistent, and sustained, the 2015 Agreement should also support the development of national loss and damage scoping studies to identify the needs of particularly vulnerable populations.

2. Provide adequate and targeted finance to build capabilities

Adequate and appropriately directed finance is essential to building capabilities and enhancing equity. The 2015 Agreement should link post-2020 finance with developing countries' national climate strategies and provide the investment needed for climate policies that also focus on strengthening long-term capabilities.

3. Create a capacity-building facility

A lack of governance and technical capacity constraints many governments from undertaking the planning and analysis needed to take climate action and enhance capabilities (UNFCCC 2014a). To prioritize capacity building within the UNFCCC, the 2015 Agreement should create a dedicated capacity-building facility, which would serve as a focal point to design, coordinate, support, and manage capability building across all elements of the 2015 Agreement.

4. Develop and deploy innovative technology that focuses on capabilities

Technology that is accessible to, and designed for, the most vulnerable and least well off will be essential to advancing low-carbon pathways and adapting in ways that build capabilities. The 2015 Agreement should stress the importance of financial institutions in funding research, development, and deployment of innovative technologies with a particular focus on technologies that can build the capabilities of the most vulnerable and least well off.

5. Strengthen transparency and accountability with a focus on capabilities

Transparency and accountability are essential for a climate agreement capable of tracking progress and deepening action over time. A capabilities approach emphasizes the need to build countries' capabilities so they can track and report on emissions, climate action, and finance. It also focuses on integrating monitoring of the ways in which climate policy affects capabilities.

6. Establish an equitable long-term mitigation goal

A collective long-term trajectory for emissions reductions or specific mitigation actions should be constructed in a way that helps countries identify specific policies and investments that help build capabilities, such as increased access to renewable energy. In committing to such a goal, the 2015 Agreement must recognize that countries with different capabilities will progress toward the goal at different paces and support will be needed to help countries with lower capabilities achieve the common goal.

7. Establish cycles of action to strengthen capabilities

The set of "cycles" envisioned in the 2015 Agreement for strengthening action after 2015 should incorporate a focus on building capabilities (UNFCCC 2014b). Each cycle should include an analysis of how future actions can be designed to further strengthen capabilities. The formulation and assessment of countries' commitments should be informed by a set of equity criteria, including those involving capabilities, determined through a technical process in the UNFCCC after 2015.

7.5. APPENDIX:

United Nations "The Social Dimensions of Climate Change" Working Group Recommendations⁶⁶

1. Complement global and regional climate analysis with social impact assessments to properly identify socioeconomic climate change 'hotspots'. Global and regional one-size-fits-all climate analysis may not reflect the reality of a particular community or country and can under- or over-emphasize risks relevant to certain communities. The outcomes of downscaling should be incorporated where relevant and feasible, and combined with complementary mappings that may include social impact assessments and vulnerability maps, in order to identify social climate-induced hotspots (places where particularly severe problems may need to be addressed) and their intersection with other kinds of vulnerabilities such as lack of access to preventive and curative health services, that can reduce health vulnerability to climate change. Impacts assessment should ideally integrate coverage of the following critical sectors and groups: impacts on employment, health, food and nutrition security, gender, children and youth, small-scale farmers and migration.

2. Develop more frequent and better-informed social impact assessments. Social impact assessments are often not conducted in tandem with the design and implementation of climate policies, and thus the policies omit essential community input into potential constraints and opportunities. Ensure that social impact assessments are conducted throughout each stage of programme and policy development.

3. Promote interministerial policy coordination/dialogue. At present, ministries, multilateral organizations and agencies often work in silos, and in so doing, neglect to fully address the complexities of climate impacts and co-benefits. At national and global level, fora must be made available for country ministers to dialogue about climate policies and ensure that their expertise is incorporated into global and national climate policies. Civil society should be part of these fora for informed and community-led decisions to be incorporated. These fora should be facilitated in coordination and alignment with national development strategies in order to guarantee that climate actions are

designed and implemented alongside social, economic and environmental national priorities

4. Ensure safeguards are in place to protect the interests of the most vulnerable when designing and implementing climate solutions. The underlying causes of vulnerability and adaptive capacity should consider the specific social determinants of climate change vulnerability using the conclusions of impact assessments and causality analyses Ensure that policies are appropriately socially inclusive and do not adversely impact the most vulnerable people.

5. Invest in human capital. Climate policies and programs have the potential to empower people as agents of change and innovators Policy-makers need to advance education and skills-building opportunities throughout the implementation of climate policies, ensuring that people are equipped with the tools to devise their own solutions and innovations, and that the most vulnerable people are empowered to minimize risk

6. Ensure that the large infrastructure changes necessary for low-carbon growth do not exacerbate societal inequities. In communities where renewable energy investments, sea walls, large- scale irrigation systems are constructed, policy-makers must ensure that communities are provided with the skills to engage with the changes so that: (i) The investments contribute to livelihood opportunities, and (ii) Social unrest and inequities do not result from large-scale transformations

7. Include social dimensions-responsive budgeting in climate finance at both national and global levels. Utilize existing budgeting parameters, such as children, health and gender-responsive budgeting, to inform the development of a social dimensions budgeting tool This tool will examine what national and global resources currently allocated for climate finance also benefit social dimensions and will allow policy-makers to budget equitably for the social dimensions of climate change.

8. Ensure that climate funding is additional to current official development assistance (otherwise funding might be diverted from essential development goals). Diversion of development funding can have dire consequences ThThe guiding principle for the multilateral system on climate change should be to provide new and additional resources to advance pro-poor, low-emission and climate-resilient development ThThis implies a focus on actions that address climate change and poverty reduction, ultimately contributing to the achievements of the MDGs

9. Identify research gaps and prioritize areas in which to bolster research. In addition to the presence of general research gaps related to the social dimensions of climate change, knowledge gaps frequently arise when designing climate policies It is important to identify and prioritize gaps in the beginning of a policy design process, and to refer to expertise to answer research questions, relying on traditional knowledge, and partnering with local research, weather and climate institutions Social impact assessment helps inform research gaps, as do causality analyses. The International Human Dimensions Programme on Global Environmental Change provides valuable best practices and research for policy-makers to consult.

7.6. APPENDIX

Climate Change, Equity, & The UN Sustainable Development Goals (Reckien, et al.) Recommendations

Adaptation:

- Make protecting the most vulnerable of urban societies the primary goal of adaptation.
- Provide sufficient infrastructure and services in all urban neighborhoods and work against the deliberate neglect of authorities to do so.
- Align adaptation with adequate financial and institutional support and economic incentives.
- Reduce ex ante vulnerabilities of women.
- Ease women's income opportunities and home-based businesses.
- Value and adequately pay for care work and female income options.
- Align measures with adequate financial and institutional support for women.

Mitigation:

- Prevent a disproportionate impact on the urban poor, e.g. by way of changes to housing affordability, as well as costs and access to transportation.

- Compensate low-income communities, cities, or regions.
- Address gender-based violence, harassment and crime through gender-sensitive mitigation actions (e.g. in transportation).
- Prevent a disproportionate impact of transportation policies on women and girls, e.g. by way of costs and access to transportation, as women and girls make more trips and change more frequently than men.

Adaptation and Mitigation:

- Form supportive institutions and governance structures to cater for the urban poor and newly arrived migrants in cities, including failure to address the negligent practices of “slumlords”.
- Include cities with large low-income populations in national and international decision-making processes.
- Support and increase enforcement of building standards.
- Adapt building standards to threats, where needed.
- Compensate low-income communities, cities, or regions to meet their adaptation challenges
- Involve women in leadership roles in community processes and local climate change politics, as women are recognized as key agents of change.
- Increase women’s participation in international and national political decision-making processes, including the UNFCCC.
- Take into account gender roles and women’s needs in adaptation and mitigation policies
- Challenge traditional gender roles and recognize and balance care work between men and women.
- Value and enable paid income options for women when implementing adaptation and mitigation options.

7.7. APPENDIX:

***Equity Impacts of Urban Land Use Planning for Climate Adaptation (Anguelovski, et al.)
Recommendations***

1. **Facilitate open dialogue.** First, we see a need and opportunity for planners to facilitate open multilevel dialogues on evaluating climate risks against adaptation options, tradeoffs, and strategies for how to realign the built environment. Communicating climate risks assessments with stakeholders in a context-sensitive manner is particularly needed. Adaptation processes should also pay attention to issues of displacing and relocating the urban poor because this may reinforce institutionalized inequities that are responsible for vulnerabilities in the first place. Planners must acknowledge that some residents will choose to stay in high-risk areas until they are, literally, washed out because they deem alternatives not worthwhile. In such cases, planners can help enhance their capacities to cope with climate impacts while remaining in place.
2. **Identify scientifically sound equitable adaptation solutions.** Second, planners can advance equitable adaptation by identifying the most scientifically sound approaches for protecting against, accommodating, or retreating from climate impacts. If these guidelines are sufficiently applied to all social groups, this would provide a framework for more equitably rebuilding or redeveloping the built environment after climate impacts or disasters. However, research is still needed on how cities can adequately evaluate the level of protection different structural and nature-based approaches can provide.
3. **Advocate for transformative adaptation interventions.** Third, planners have an obligation to advocate for transformative adaptation interventions that place justice front and center, and avoid marketing “resilient” projects that merely re-package development-as-usual. Planners can facilitate meaningful engagement of marginalized urban residents through iterative processes that at times may result in difficult debates and trade-offs. Here, scholars have an opportunity to support planners by identifying best practices and

developing principles to guide project evaluation. For example, they could propose an environmental justice assessment of climate adaptation options much like Executive Order 12898 in the United States.

4. **Manage private interests by working with investors.** Planners and municipal officials must manage private interests so that investors can provide the needed resources to prepare cities in response to climate impacts rather than dictate the objectives and beneficiaries of funding flagship economic zones or business corridors. Both elite actors and marginalized groups should accept some responsibility for reducing impacts or bearing the burden of adaptation.

8. ENDNOTES

¹ The key findings were taken from various journal articles and reports on the subject of climate equity and climate justice, based on what was observed to be the most relevant and actionable for the City and County of Honolulu.

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⁶ The recommendations were aggregated based on peer-reviewed journal articles and reports and chosen based on their relevance and feasibility in the context of the City and County of Honolulu. The recommendations from these various sources can be found in the appendix of this document.

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