

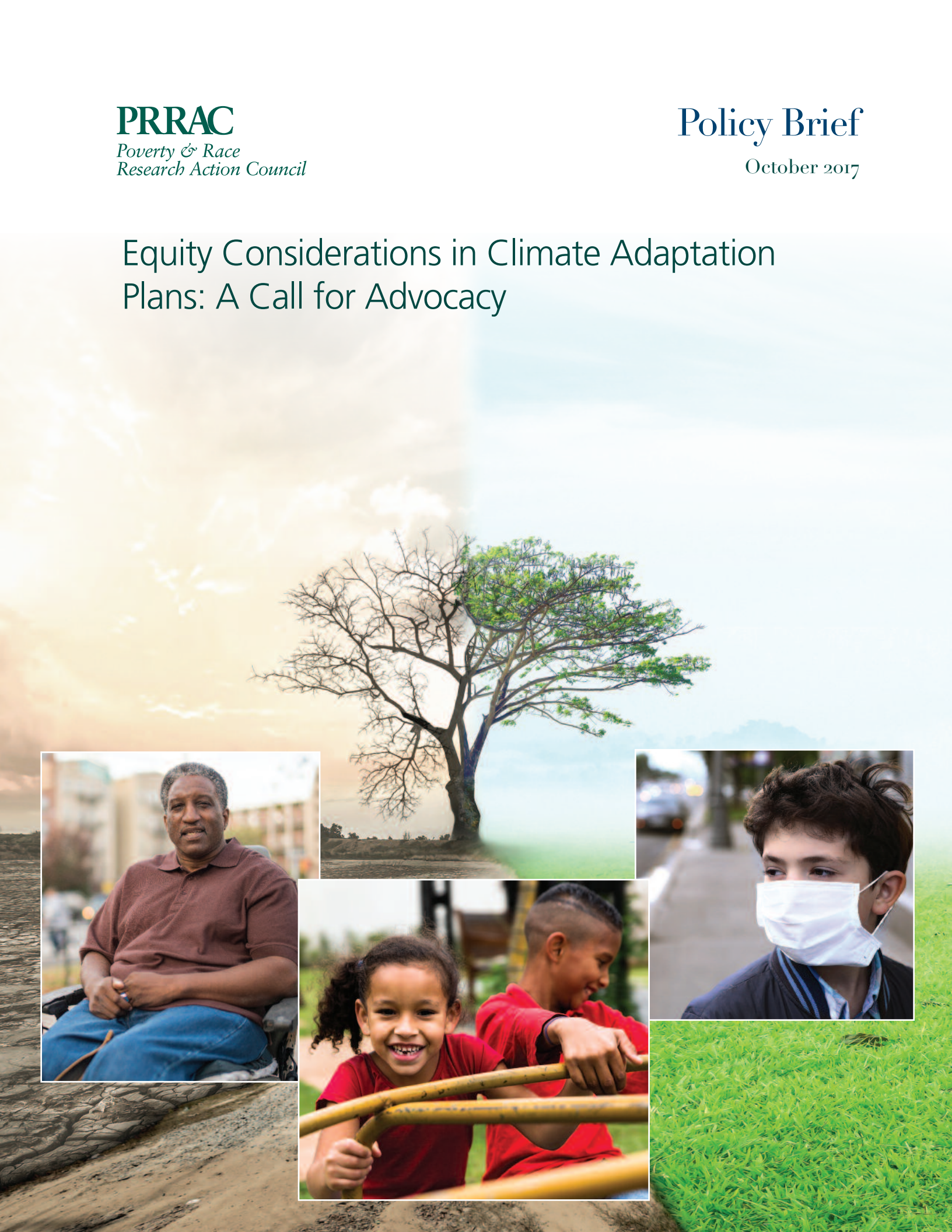
PRRAC

*Poverty & Race
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Policy Brief

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Equity Considerations in Climate Adaptation Plans: A Call for Advocacy



Equity Considerations in Climate Adaptation Plans: A Call for Advocacy¹

I. Introduction

The need to prepare for climate change often receives little public attention until a devastating disaster such as a hurricane or wildfire strikes. However, we cannot afford to wait until we are forced to deal with a catastrophe to begin the climate change planning process. Proactive planning is essential in order to effectively respond to climate threats. Actors at every level of government must understand that they have an important role in planning for climate change. The growing threat posed by climate change has prompted many states and localities to develop adaptation plans. Many federal agencies similarly developed climate plans, but the Trump Administration is retreating from climate change adaptation efforts. Such climate adaptation plans typically include strategies to increase the resilience of infrastructure and prepare communities to cope with the effects of climate change, including extreme weather events, rising sea levels and increased urban heat and air pollution.

When planning, it is vitally important to recognize that the effects of climate change will not be felt equally by all residents. Disadvantaged groups such as low-income communities and racially segregated communities are on the frontline of climate change. Such communities are likely to be disproportionately burdened by the adverse effects of climate change and are less likely to have the capacity to adapt to such change. This is due in part to financial, social, and geographic barriers that create disparities in areas such as public health. Climate effects may therefore magnify existing inequality. Moreover, these communities are less likely to be included in decision-making on climate change policy, and therefore may miss out on some of the beneficial opportunities that may arise from climate solutions. Yet while many localities and states have developed climate change adaptation plans, they often do not include a focus on equity for vulnerable communities. These plans may also fail to adequately consider connections to related areas, such as affordable and subsidized housing policy. As we discuss

1 This Policy Brief was authored by Peter Kye, PRRAC Law & Policy Fellow. Many thanks to Carrie Zaremba, PRRAC summer research assistant, for her excellent survey of state and local climate adaptation plan language and Megan Haberle, PRRAC Director of Housing Policy, for her guidance.

below, explicit equity directives should be incorporated throughout climate change plans in order to address disparities and ensure that environmental justice (EJ) is achieved.

Equity directives in climate plans can build upon several existing legal duties that promote equity in government actions. Title VI of the Civil Rights Act of 1964 prohibits taxpayer money from being spent in a way that discriminates on the basis of race, color, or national origin.² Under a 1994 executive order, federal agencies are required to evaluate the environmental justice implications of their actions.³ The Fair Housing Act prohibits discrimination in housing-related services and requires agencies administering housing and development programs to do so in a way that furthers fair housing. Most recently, the Affirmatively Furthering Fair Housing (AFFH) Rule, finalized in 2015, makes clear that the Fair Housing Act requires U.S. Department of Housing and Urban Development (HUD) grantees to take active steps in planning to promote integrated communities and access to opportunity.⁴ The AFFH rule requires grantees to conduct an Assessment of Fair Housing (AFH) that identifies fair housing issues and develops strategies to address them.⁵ Improved monitoring and enforcement of these obligations at the federal level remains needed. Yet proactive steps by state and local policymakers, advocates, and community members also play an essential role in advancing environmental justice.

This policy brief provides an overview of equity language in various existing climate adaptation plans at the federal, state, and municipal levels; identifies best practices for including a focus on climate equity; and offers recommendations for policymakers and advocates to promote equity and environmental justice in climate change plans. We recommend that climate adaptation plans:

- Embed equity considerations throughout the full scope of climate planning
- Enhance community engagement to receive input from vulnerable populations
- Develop concrete equity metrics
- Use equity goals to set specific action steps
- Connect climate planning with fair housing

2 42 U.S.C. § 2000d et seq.

3 Exec. Order No.12898, Fed. Reg.7629 (Feb. 11, 1995).

4 24 C.F.R. § 5.150 (2015).

5 *Id.*

II. Federal Agency Plans and Federal Developments

The Trump Administration has significantly curtailed Obama-era efforts to combat climate change. On March 28, 2017, President Trump signed a sweeping executive order to reverse several federal climate change efforts.⁶ One key part of the order directed the EPA to begin the process of withdrawing and revising the Clean Power Plan, a policy designed to significantly reduce carbon emissions from electrical power plants.⁷ The EPA review is widely expected to produce a proposal to replace the plan with a far weaker version.⁸ In addition, that executive order rescinded President Obama's 2013 executive order mandating the federal government to improve the preparedness and resilience of federal agencies.⁹ The March 2017 executive order also sought to revise how the "social cost of carbon", a metric used to assess climate impacts in rulemaking, is measured.¹⁰ Specifically, the "social cost of carbon" is an estimate of the damage caused by carbon pollution to things such as changes in agricultural productivity, human health, property damage from increased flood risk, and changes in energy costs.¹¹ Changing the way the social cost is measured to make carbon pollution seem less costly to society could have far-reaching consequences. As calculated under this new math, the apparent costs of rules fighting climate change would supposedly increase while the apparent benefits would supposedly decrease.¹² This could greatly impact federal regulations.

Other actions have continued the Trump Administration's efforts to roll back President Obama's climate policies. On June 1, 2017, President Trump announced that he would seek to withdraw the United States from the Paris Climate Agreement.¹³ On August 15, 2017, the Trump administration announced that it intended to repeal the Federal Flood Risk Mitigation Standard.¹⁴ The standard, established in 2015 but not yet fully implemented, is designed to

6 Exec. Order 13783 Fed. Reg. 16093 (Mar. 28, 2017).

7 Nathan Hultman, *Trump's Executive Order on Energy Independence*, PLANETPOLICY (Mar. 28, 2017), <https://www.brookings.edu/blog/planetpolicy/2017/03/28/trumps-executive-order-on-energy-independence/>

8 Robin Bravender & Niina Heikkinen, & E&E News, *Trump Administration May Soon Ax Obama's Big Climate Rule*, SCIENTIFIC AMERICAN, Sep. 25, 2017, <https://www.scientificamerican.com/article/trump-administration-may-soon-ax-obamas-big-climate-rule/>.

9 Exec. Order 13783 Fed. Reg. 16093 (Mar. 28, 2017).

10 *Id.*

11 U.S. Environmental Protection Agency, *The Social Cost of Carbon* (Jan. 19, 2017), https://19january2017snapshot.epa.gov/climatechange/social-cost-carbon_.html.

12 Danny Vinik, *The Hidden Impact of Trump's Energy Executive Order*, POLITICO, Mar. 30, 2017, <http://www.politico.com/agenda/story/2017/03/the-hidden-impact-of-trumps-energy-executive-order-000384>.

13 Philip Rucker & Jenna Johnson, *Trump Announces U.S. Will Exit Paris Climate Deal, Sparking Criticism at Home and Abroad*, WASH. POST, June 1, 2017, https://www.washingtonpost.com/politics/trump-to-announce-us-will-exit-paris-climate-deal/2017/06/01/fbcb0196-46da-11e7-bcde-624ad94170ab_story.html?utm_term=.0541871bb2a5.

14 Lisa Friedman, *Trump Signs Order Rolling Back Environmental rules on Infrastructure*, N.Y. TIMES, Aug. 15, 2017, <https://www.nytimes.com/2017/08/15/climate/flooding-infrastructure-climate-change-trump-obama.html?mcubz=0>.

make federally funded infrastructure and building projects more resilient to the effects of climate-related flooding and sea-level rise.¹⁵

Some of the most drastic changes in federal climate policy have occurred at the EPA. Administrator Scott Pruitt rejects the scientific consensus that carbon emissions are the main cause of climate change, and his tenure at the EPA has seen attempts to counter climate change actions.¹⁶ For instance, solicitations for EPA grants are no longer allowed to reference climate change.¹⁷ Pruitt also recently declared that a major upcoming federal science report on climate change will be reviewed for “accuracy”, leading to concern about its release.¹⁸ The future implementation of climate change adaptation plans at the federal level is therefore uncertain.

Previously, President Obama had issued Executive Order 13514 in October 2009, directing federal agencies to prepare climate adaptation plans.¹⁹ President Obama followed this directive with Executive Order 13653 in 2013, which required federal agencies to further develop, update, and implement climate plans.²⁰ As noted above, this order is now rescinded. Federal agencies first issued adaptation plans in February 2013. Plans released by the **Environmental Protection Agency (EPA)**, **U.S. Department of Health and Human Services (HHS)**, and the **U.S. Department of Housing and Urban Development (HUD)**, for example, all discussed equity concerns.

The **EPA's** 2013 plan explicitly stated that climate change raises environmental justice issues and committed the agency to integrating EJ issues and climate adaptation into its policies, programs, rules, and operations.²¹ The plan noted that climate change may exacerbate existing environmental issues along with their associated health consequences and introduce new ones for groups such as indigenous and tribal communities, the elderly, children, and the poor.²² In

15 *Id.*

16 Doina Chiacu & Valerie Volcovici, *EPA Chief Unconvinced on CO2 Link to Global Warming*, REUTERS, Mar. 9, 2017, <https://www.reuters.com/article/us-usa-epa-pruitt/epa-chief-unconvinced-on-co2-link-to-global-warming-idUSKBN16G1XX>.

17 Juliet Eilperin, *EPA Now Requires Political Aide's Sign-off for Agency Awards, Grant Applications*, WASH. POST, Sep. 4, 2017, https://www.washingtonpost.com/politics/epa-now-requires-political-aides-sign-off-for-agency-awards-grant-applications/2017/09/04/2fd707a0-88fd-11e7-a94f-3139abce39f5_story.html?utm_term=.b0e8628a4f41.

18 Emily Holden, *Pruitt: EPA Will Review 'politicized' Climate Science Report*, POLITICO, Aug. 11, 2017, <http://www.politico.com/story/2017/08/11/pruitt-climate-report-epa-241546>.

19 Exec. Order No. 13514, 74 Fed. Reg. 52117 (Oct. 5 2009).

20 Exec. Order No. 13653, 78 Fed. Reg. 66817 (Nov. 1, 2013).

21 U.S. EPA, U.S. ENVIRONMENTAL PROTECTION AGENCY CLIMATE CHANGE ADAPTATION PLAN 34-35 (2014), *available at* https://www.epa.gov/sites/production/files/2015-08/documents/adaptationplans2014_508.pdf.

22 *Id.* at 34.

addition, the plan further committed the EPA to place special attention on overburdened communities and help empower them to adapt to climate change.²³

The 2014 **HHS** Climate Adaptation Plan declared that the agency views climate change as a top public health challenge.²⁴ Like other adaptation plans, the HHS plan discussed how lower-income communities and communities of color are at higher risk from the health effects of climate change.²⁵ The plan also recognized that communities already experiencing adverse environmental conditions may be disproportionately affected by climate change.²⁶

HUD's 2014 Climate Change Adaptation Plan extensively discussed how climate change may uniquely affect housing.²⁷ When considering the impact of climate change, it is important to recognize that the vulnerability of people of color and low-income residents may be increased because they live in racially concentrated areas of poverty and/or in substandard housing vulnerable to extreme weather.²⁸ The plan recognized that residents of these areas are less likely to have the capacity to adapt to climate change, and also pointed out that such areas are more likely to rely on federal assistance.²⁹

The HUD plan's recommended climate actions fell into five broad categories: 1) updating programs, policies, and regulations; 2) developing toolkits and training materials for HUD grantees; 3) preparing and training HUD staff; 4) conducting research on climate-related risk; and 5) other actions.³⁰ For the first category, HUD's plan suggested reviewing existing programs for barriers to investments in resilience and sustainability and updating building standards to incorporate sustainability and resilience measures.³¹ Other key suggestions included reviewing and improving public housing authority (PHA) insurance policy rules to better cope with damage from climate-related hazards and encouraging grantees to analyze climate change in consolidated plans.³² In terms of developing training for HUD grantees, the plan first recommended developing guidance and tools to help grantees incorporate climate risk mitigation into their affordable housing and community development programs.³³ Other key proposals included developing guidance on building design, construction, and retrofit for

23 *Id.* at 35.

24 U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, HHS CLIMATE ADAPTATION PLAN 2 (2014), *available at* <https://www.hhs.gov/sites/default/files/about/sustainability/2014-climate-change.pdf>.

25 *Id.* at 12.

26 *Id.*

27 U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, HOUSING AND URBAN DEVELOPMENT CLIMATE ADAPTATION PLAN (2014), *available at* <https://www.hud.gov/sites/documents/HUD2014CCADAPTPLAN.PDF>.

28 *Id.* at 49.

29 *Id.*

30 *Id.* at 12, 23, 34, 41, 44.

31 *Id.* at 17-18.

32 *Id.* at 19, 21

33 *Id.* at 23.

sustainability and resilience and providing training for Fair Housing Initiatives Program (FHIP) and Fair Housing Assistance Program (FHAP) grantees on fair housing issues that emerge in the aftermath of climate-related disasters.³⁴ The plan specifically noted that such training is needed because disaster response may lead to unintended environmental justice, civil rights, and fair housing violations.³⁵ To prepare and train HUD staff, the plan advised taking actions such as providing training on disaster response assistance resources and protocols and taking projections of climate-related risk in different areas into account when making field office staffing decisions.³⁶ Actions to research climate-related risks included identifying vulnerable HUD assets, researching accessibility and resilient building measures, and surveying residents in HUD-assisted properties to determine special needs that could affect disaster response.³⁷ The last category of actions included measures such as drafting equitable and responsible principles for potential climate-related relocation, and improving energy efficiency and clean energy use in residential buildings.³⁸

The HUD plan's Risk and Vulnerabilities Assessment, contained in the appendix, identified many possible consequences that climate change could have for fair housing. For example, community opposition and exclusionary zoning may hinder attempts to build HUD-supported affordable housing in less vulnerable areas that could be occupied by people of color, individuals with disabilities, and families with children.³⁹ These hurdles to development combined with widespread discrimination against voucher holders could affect the ability of Section 8 recipients to relocate to less vulnerable areas.⁴⁰ Rebuilding after climate change related disasters might also contribute to or perpetuate racial segregation as destroyed low-income housing units may not be replaced, raising AFFH concerns.⁴¹

One notable vulnerability is the fact that adaptation planning at the state and local levels may exclude PHAs and so may not consider the needs of PHA residents.⁴² As HUD programs directly serve vulnerable populations at greatest risk from climate effects such as extreme weather events, they may face serious difficulties in adapting to climate change. For instance, the Housing Choice Voucher Program has a limited ability to identify and track housing type, resident needs, and the location of residents and also lacks a standard operating procedure for natural disasters.⁴³ Physical damage from climate change threatens housing, and funding for other programs could also be threatened by increased disasters.⁴⁴

34 *Id.* at 26, 28.

35 *Id.* at 28.

36 *Id.* at 36, 38.

37 *Id.* at 41-43.

38 *Id.* at 44-45.

39 *Id.* at 50.

40 *Id.*

41 *Id.*

42 *Id.* at 49.

43 *Id.* at 51.

44 *Id.*

III. Current Local and State Plans

The federal role in climate adaptation planning has an irreplaceable impact on environmental justice, given federal regulatory and funding power. However, local and state plans also play a crucial role. As we describe below, a number of positive models exist, but wider action is needed.

Localities

Cities have been leaders in creating climate change adaptation plans that incorporate equity concerns. **Boston, Portland,** and **Seattle** are among the cities that have developed comprehensive strategies to meet the challenges posed by climate change. All of these cities' plans highlight the need to address the concerns of community members and to reduce disparities that may be exacerbated or caused by climate change.

Boston issued a climate report, "Climate Ready Boston", in December 2016.⁴⁵ The report takes equity into account by mapping concentrations of socially vulnerable populations, including people of color, the elderly, children, Limited English Proficient (LEP) individuals, low-income individuals, and individuals with disabilities around the city.⁴⁶ In particular, the report outlines the specific challenges each population faces and that people of color are more likely to have multiple vulnerable characteristics.⁴⁷ In terms of housing, the report notes that resiliency improvements may affect housing affordability, and commits the city to address the possible impacts from improvements by creating a resilience and racial equality toolkit to evaluate how various climate policies affect equity.⁴⁸ The toolkit is designed to ensure that racial equity and social cohesion form the foundation of Boston's climate decision-making processes.⁴⁹ The plan also frames climate investment as an economic development opportunity that can be leveraged to advance social equity.⁵⁰

Portland, Oregon is especially noteworthy for the way that equity is integrated throughout its 2015 Climate Action plan.⁵¹ The plan explicitly states that one key consideration for climate action is the potential to reduce existing disparities, address community needs, and achieve more equitable outcomes.⁵² The plan defines climate equity as ensuring the just distribution of the benefits of climate protection efforts and alleviating the unequal burdens created by

45 CITY OF BOSTON & GREEN RIBBON COMMISSION, CLIMATE READY BOSTON (2006), *available at* https://www.boston.gov/sites/default/files/20161207_climate_ready_boston_digital2.pdf.

46 *Id.* at 30-31.

47 *Id.* at 30.

48 *Id.* at 88.

49 *Id.*

50 *Id.* at 95.

51 CITY OF PORTLAND AND MULTONAMAH COUNTY, CLIMATE ACTION PLAN: LOCAL STRATEGIES TO ADDRESS CLIMATE CHANGE (2015), *available at* <https://www.portlandoregon.gov/bps/article/531984>.

52 *Id.* at 138.

climate change.⁵³ Additionally, the plan declares that climate equity requires action that “simultaneously address the effects of and the systems that perpetuate both climate change and inequality.”⁵⁴ A section of the plan devoted to equity explicitly recognizes that strategies to address climate change can exacerbate existing disparities unless there is a specific focus on equity, and notes that disparities are the legacy of past discriminatory practices and institutional biases.⁵⁵ To achieve more equitable outcomes from climate planning, the City and County adopt a targeted universalism approach that prioritizes the specific needs of vulnerable communities in areas such as public health, economic development, infrastructure, and housing.⁵⁶

This plan’s appendix outlines several overarching equity objectives to be integrated in climate action. The plan also separates climate equity efforts into three broad categories: procedural, distributional, and structural. Procedural equality means that processes are fair and inclusive. Distributional equality refers to ensuring that resources, benefits, and burdens are distributed fairly and prioritize those with the highest need. Structural equality refers to commitment and action to correct past harms and prevent future negative consequences. A separate equity implementation guide and equity metrics were also developed to help staff evaluate actions in relation to climate equity objectives.

Seattle issued a Climate Action Plan in 2013.⁵⁷ The plan declares that racial and social equity is fundamental to the design and implementation of climate strategies dealing with land use, transportation, and energy.⁵⁸ The plan also notes that climate strategies offer opportunities to enhance equity. For example, enhanced energy efficiency can help lower overall housing costs.⁵⁹ Furthermore, the plan calls for prioritizing actions that help vulnerable populations adapt to climate change and incorporating input from members of vulnerable populations.⁶⁰

States

California and **New York** are two states that have robustly addressed equity issues in their climate adaptation planning. In **California**, a 2014 plan (entitled “Safeguarding California”) outlined climate adaptation strategies in a variety of sectors including public health,

53 *Id.* at 42.

54 *Id.*

55 *Id.* at 43.

56 DESIREE WILLIAMS-RAJEE & TAREN EVANS, CLIMATE ACTION THROUGH EQUITY: THE INTEGRATION OF EQUITY IN THE PORTLAND/MULTNOMAH COUNTY 2015 CLIMATE ACTION PLAN (2016), *available at* <https://www.portlandoregon.gov/bps/article/583501>.

57 SEATTLE OFFICE OF SUSTAINABILITY & ENVIRONMENT, SEATTLE CLIMATE ACTION PLAN (2013), *available at* http://www.seattle.gov/Documents/Departments/OSE/2013_CAP_20130612.pdf.

58 *Id.* at 18, 34.

59 *Id.* at 34.

60 *Id.* at 54.

transportation, and land use and community development.⁶¹ An updated version of the plan, due to be released by the end of 2017, contains a recommendation to ensure a coordinated and robust strategy to address environmental justice issues and the state's most vulnerable populations.⁶² Some proposed next steps include making equity a key consideration for state-funded research on climate impacts and connecting EJ in local planning to state climate adaptation activities.⁶³ The 2017 updated plan includes an appendix devoted to EJ issues that discusses the underlying reasons why disadvantaged communities are more vulnerable to climate change as well as recommendations to ensure that equity concerns are included in climate planning.⁶⁴ The appendix describes a wide variety of communities that are vulnerable to climate change, such as people of color, low-income individuals, individuals with disabilities, immigrants, formerly incarcerated persons, and LEP individuals.⁶⁵ The draft language acknowledges that vulnerability to climate change is often the result of the inequitable distribution of power and resources, and resultant socioeconomic and living conditions.⁶⁶ Specific factors that contribute to the vulnerability of communities including 1) existing inequities and institutionalized racism, 2) poor environmental conditions, access to services, or living conditions, 3) physical conditions that increase vulnerability, and 4) a lack of investment and opportunities.⁶⁷ Furthermore, the appendix explains that vulnerable populations often experience multiple forms of vulnerability at once.⁶⁸ Consequently, the plan stresses that disparities in employment, income, wealth, housing conditions, and health need to be reduced and resources and investment for vulnerable communities must be prioritized as part of an overarching strategy to combat climate change.⁶⁹ A series of climate-justice related recommendations for each sector discussed in the plan are also laid out in the appendix.

Although **New York** has yet to finalize a climate adaptation plan, the New York State Climate Action Council released a Climate Action Plan Interim Report in 2010 containing a chapter that examines ways to prepare for climate change.⁷⁰ A central theme of the chapter is that climate change will disproportionately affect certain groups. Therefore, identifying these groups is

61 CALIFORNIA NATURAL RESOURCES AGENCY, SAFEGUARDING CALIFORNIA: REDUCING CLIMATE RISK 5 (2014), *available at* http://resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf.

62 CALIFORNIA NATURAL RESOURCES AGENCY, DRAFT REPORT, SAFEGUARDING CALIFORNIA PLAN: 2017 UPDATE 43, (2017), *available at* <http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-2017-Update.pdf>.

63 *Id.*

64 CALIFORNIA NATURAL RESOURCES AGENCY, DRAFT REPORT, SAFEGUARDING CALIFORNIA PLAN: 2017 UPDATE APP. A: CLIMATE JUSTICE (2017). *available at*, <http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-Appendix-A.pdf>

65 *Id.* at 3.

66 *Id.* at 1.

67 *Id.* at 1-2.

68 *Id.* at 2.

69 *Id.* at 3.

70 NEW YORK STATE CLIMATE ACTION COUNCIL, CLIMATE ACTION PLAN INTERIM REPORT 11-1 (2017), *available at* http://www.dec.ny.gov/docs/administration_pdf/irchap11.pdf.

important to prevent adaptation policies from exacerbating existing inequalities or creating new ones.⁷¹ Within the chapter, there were specific recommendations for eight different sectors: agriculture, coastal zones, ecosystems, energy, transportation, public health, telecommunications and information infrastructure, and water resources.⁷² The chapter also laid out specific EJ considerations for each recommendation. For example, the report recognized that energy planning can help locate energy infrastructure away from EJ neighborhoods and reduce pollution.⁷³ EJ considerations for coastal issues include the need to assist coastal low-income communities in developing resilience plans, adapting infrastructure, and helping low-income property owners.⁷⁴ Public health EJ considerations include ensuring equity in access to resources and reducing disparities as well as the need to have culturally competent public education and outreach.⁷⁵ In the transportation portion of the report, a key EJ consideration is the potential for transit-oriented development to price out poorer residents.⁷⁶

Several other states including **Connecticut, Florida, Maine, Maryland, Massachusetts, New Hampshire,** and **Washington** incorporated equity concerns into their climate adaptation plans but are less strong than the plans in New York and California.

Connecticut finalized a Climate Change Preparedness Plan in 2011 that specifically focuses on “Environmental Justice Communities” at various points.⁷⁷ EJ communities were defined in an earlier 2010 report as those communities in which 30% or more of the population are living below 200% of the federal poverty level.⁷⁸ The 2011 Climate Preparedness Plan specifically acknowledges that EJ communities are likely to suffer from reduced public health outcomes due to climate change.⁷⁹ As a best practice, the plan recommends considering the needs of vulnerable populations such as EJ communities in public health planning.⁸⁰

Florida adopted a statewide climate action plan in 2008 that includes equity concerns as an element of the plan’s adaptation framework.⁸¹ One of the objectives is to address social justice

71 *Id.* at 11-5.

72 *Id.* at 11-3.

73 *Id.* at 11-38.

74 *Id.* at 11-24.

75 *Id.* at 11-47.

76 *Id.* at 11-76.

77 ADAPTATION SUBCOMMITTEE TO THE GOVERNOR’S STEERING COMMITTEE ON CLIMATE CHANGE, CONNECTICUT CLIMATE CHANGE PREPAREDNESS PLAN: ADAPTATION STRATEGIES FOR AGRICULTURE, INFRASTRUCTURE, NATURAL RESOURCES AND PUBLIC HEALTH CLIMATE CHANGE VULNERABILITIES (2011), *available at* http://www.ct.gov/deep/lib/deep/climatechange/connecticut_climate_preparedness_plan_2011.pdf.

78 ADAPTATION SUBCOMMITTEE TO THE GOVERNOR’S STEERING COMMITTEE ON CLIMATE CHANGE, THE IMPACTS OF CLIMATE CHANGE ON CONNECTICUT AGRICULTURE, INFRASTRUCTURE, NATURAL RESOURCES AND PUBLIC HEALTH 170 (2010), *available at* <http://www.ct.gov/deep/lib/deep/climatechange/impactsofclimatechange.pdf>.

79 ADAPTATION SUBCOMMITTEE TO THE GOVERNOR’S STEERING COMMITTEE ON CLIMATE CHANGE, *supra* note 76, at 12.

80 *Id.* at 65.

81 GOVERNOR’S ACTION TEAM ON ENERGY & CLIMATE CHANGE, FLORIDA’S ENERGY & CLIMATE ACTION PLAN (2008), *available at* <https://www.broward.org/NaturalResources/ClimateChange/Documents/phase2report08.pdf>.

issues such as food, water, and housing security.⁸² A technical appendix provides more details on equity goals for the plan. These include 1) promoting social and economic equity and improving the quality of life for vulnerable citizens and 2) assessing the potential social impacts of climate change on incomes and other measures of well-being in vulnerable communities.⁸³ Another goal is to consider the potential impacts of climate change on housing, particularly housing located on the coast.⁸⁴

Maine's Adaptation Report, released in February 2010, is based on several guiding principles including the principle that climate change will disproportionately affect certain communities who must be included in planning and implementation efforts and whose needs must be taken into special account.⁸⁵ Stakeholders involved in the creation of the plan stressed that communities such as the elderly, refugees and migrants, low income groups, and indigenous people may be disproportionately affected by climate change due to factors such as having less access to information and resources.⁸⁶ A series of recommendations discuss the need to address the unique social effects of climate change in Maine. For instance, one recommendation is to ensure that Maine's aging urban housing stock, including multi-family and public housing units, is resilient to climate change effects.⁸⁷ As Maine is a largely rural state, the plan stresses the importance of considering the particular needs of rural communities.⁸⁸ Strategies to address health and social well-being include integrating the concerns of Maine's vulnerable communities into climate adaptation planning by identifying specific groups at risk, developing methods to ensure that service providers are aware of the special needs of vulnerable populations, and providing climate information that takes into account differences in perceptions and cultural norms.⁸⁹

Maryland finalized Phase I of its strategy to address climate change in 2008 and finalized Phase II of its adaptation strategy in 2011. Like other plans, Phase I of Maryland's plan recommends targeting education, outreach, training, and capacity building to address the specific needs of low-income and underserved populations as part of the implementation process.⁹⁰ Phase II of

82 *Id.* at 8-5.

83 *Id.* at 50.

84 *Id.*

85 MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, PEOPLE AND NATURE ADAPTING TO A CHANGING CLIMATE: CHARTING MAINE'S COURSE 11 (2010), *available at* <http://www.maine.gov/tools/whatsnew/attach.php?id=369026&an=1>.

86 *Id.* at 47.

87 *Id.* at 40.

88 *Id.* at 45.

89 *Id.* at 48.

90 MARYLAND COMMISSION ON CLIMATE CHANGE ADAPTATION AND RESPONSE WORKING GROUP, COMPREHENSIVE STRATEGY FOR REDUCING MARYLAND'S VULNERABILITY TO CLIMATE CHANGE PHASE I: SEA-LEVEL RISE AND COASTAL STORMS 28 (2008), *available at* http://climatechange.maryland.gov/wp-content/uploads/sites/16/2014/12/ian_report_1971.pdf.

Maryland's strategy is designed for building societal, economic, and ecological resilience.⁹¹ It lays out a series of comprehensive strategies that address equity concerns. With regard to health, the plan notes that social factors such as race and economic status significantly affect exposure and vulnerability to climate change as well as the ability of people to recover from climate impacts.⁹² The plan recommends taking steps such as conducting vulnerability assessments of Maryland's populations to better understand health risks and craft responses.⁹³ The plan also recommends aligning health information with other spatial data to help protect vulnerable communities and prevent environmental injustice from occurring.⁹⁴

Massachusetts released a climate change adaptation report in 2011. One of the core guiding principles for the report is ensuring that adaptation efforts are aware of and plan for the unique needs of vulnerable populations, defined as those who are more susceptible to the effects of climate change such as health issues and extreme weather and for whom adaptive change will be more difficult.⁹⁵ The report underscores that priority should be given to plans that protect particularly vulnerable populations or those with unequal access to resources.⁹⁶ The report put forward several strategies to adapt to climate change including conducting risk and vulnerability assessments for populations including economically disadvantaged communities, LEP individuals, and urban communities.⁹⁷ In a later chapter discussing the health implications of climate change, the report explicitly notes that a focus on vulnerable populations requires understanding community characteristics, conditions that contribute to risk, and obstacles to resiliency.⁹⁸ A chapter on human health and welfare covers the effects of climate change on public health, air quality, water quality, and agriculture and food systems and associated equity concerns.⁹⁹ Populations that are especially vulnerable to poor air quality include the elderly, low-income groups, uninsured or under-insured people, residents of older or substandard housing, and the homeless.¹⁰⁰ The elderly as well as some low-income groups with higher exposure to poor water quality are vulnerable to the threats that climate change poses to water quality.¹⁰¹ Low-income communities, immigrants, and those living in food deserts are some of the most vulnerable to climate change effects on food systems.¹⁰²

91 MARYLAND COMMISSION ON CLIMATE CHANGE ADAPTATION AND RESPONSE AND SCIENTIFIC AND TECHNICAL WORKING GROUPS, COMPREHENSIVE STRATEGY FOR REDUCING MARYLAND'S VULNERABILITY TO CLIMATE CHANGE PHASE II: BUILDING SOCIETAL, ECONOMIC, AND ECOLOGICAL RESILIENCE (2011), *available at* http://climatechange.maryland.gov/wp-content/uploads/sites/16/2014/12/ian_report_2991.pdf.

92 *Id.* at 8.

93 *Id.* at 2.

94 *Id.* at 12.

95 EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS & CLIMATE CHANGE ADAPTATION ADVISORY COMMITTEE, MASSACHUSETTS CLIMATE CHANGE ADAPTATION REPORT 25 (2011), *available at* <http://www.mass.gov/eea/docs/eea/energy/cca/eea-climate-adaptation-report.pdf>.

96 *Id.* at 26.

97 *Id.* at 28.

98 *Id.* at 72.

99 *Id.*

100 *Id.* at 78.

101 *Id.* at 82.

102 *Id.* at 83.

New Hampshire released a Climate Action Plan in 2009.¹⁰³ Similar to other plans, one guiding principle of the plan is to ensure that policies 1) do not further disadvantage already disadvantaged populations, and 2) include mechanisms to mitigate adverse impacts to disadvantaged populations.¹⁰⁴ A chapter on adaptation emphasizes the need to focus policies to help the most at-risk populations to prepare for the physical and social effects of climate change.¹⁰⁵ The plan's overarching strategy further calls for promoting policies to help at-risk populations and states that climate change impacts may be felt in transportation, food and water, health care, and home energy costs.¹⁰⁶

Washington State's plan aims to protect vulnerable communities by increasing public health capacity to monitor, detect, plan, and respond to climate-related effects.¹⁰⁷ The plan recognizes several vulnerable populations including those who speak English as a second language, people of color, and low-income individuals and also acknowledges that they may face difficulties in obtaining decent housing, employment, and healthcare.¹⁰⁸ Climate change may further reduce their ability and capacity to improve their quality of life.¹⁰⁹ To respond to climate change, the plan suggests increasing the capacity of local organizations to reach vulnerable populations and providing more information about climate change preparation to at risk groups.¹¹⁰

Climate adaptation plans in other states reflect a reduced emphasis on equity. **Alaska's** statewide plan recognizes that climate change poses disproportionate risks to rural communities and proposes strategies to provide climate impact assistance to these communities and to improve access to healthcare.¹¹¹ **Pennsylvania's** plan makes brief references to the vulnerability of the poor and other groups during extreme weather events.¹¹² **Virginia's** plan includes language about the health consequences that people of color, people of lower socioeconomic status, and those with disabilities may face from the effects of climate

103 NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, THE NEW HAMPSHIRE CLIMATE ACTION PLAN: A PLAN FOR NEW HAMPSHIRE'S ENERGY, ENVIRONMENTAL, AND ECONOMIC DEVELOPMENT FUTURE (2009), *available at* https://www.des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/nhcap_final.pdf.

104 *Id.* at 17.

105 *Id.* at 29.

106 *Id.* at 60.

107 WASHINGTON STATE DEPARTMENT OF ECOLOGY, PREPARING FOR A CHANGING CLIMATE: WASHINGTON STATE'S INTEGRATED CLIMATE RESPONSE STRATEGY 11 (2012), *available at* <https://fortress.wa.gov/ecy/publications/documents/1201004.pdf>.

108 *Id.* at 53.

109 *Id.*

110 *Id.* at 59.

111 ADAPTATION ADVISORY GROUP TO THE ALASKA CLIMATE CHANGE SUB-CABINET, ALASKA'S CLIMATE CHANGE STRATEGY: ADDRESSING IMPACTS IN ALASKA 7-1 - 7-9 (2010), *available at* https://climatechange.alaska.gov/aag/docs/aag_all_rpt_27jan10.pdf.

112 PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PENNSYLVANIA CLIMATE ADAPTATION PLANNING REPORT: RISKS AND PRACTICAL RECOMMENDATIONS 46-47, 83, 96 (2010), *available at* <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-103584/2700-RE-DEP4303%20Combined.pdf>.

change.¹¹³ **Oregon's** plan lays out a principle of prioritizing the most vulnerable and briefly mentions the public health impacts on vulnerable health populations.¹¹⁴ **Colorado** has a climate change adaptation plan but it only addresses equity briefly in a section about home energy efficiency.¹¹⁵

IV. Best Practices

The review of existing climate plans revealed several best practices that other plans should consider following to integrate equity into their plans. In our view, climate plans should consider equity throughout different sectors and communities and apply equity considerations broadly. Second, the climate planning process should involve strong input from vulnerable communities. Third, concrete equity metrics should be established that shape the development of a plan and track how equity is being integrated into the implementation of a plan. Fourth, equity goals should be used to inform specific action proposals. Lastly, climate planning should consider fair housing concerns, as housing will be seriously affected by a changing climate.

Scope of Equity Considerations

From the very outset, climate adaptation plans should apply an equity lens that considers the need of vulnerable communities. Jurisdictions and agencies should incorporate equity into the vision of the plan and consider a wide range of equity considerations throughout the plan. Unfortunately, too many existing plans only discuss vulnerable communities and equity in the contexts of energy efficiency or public health. Boston, Portland, California, and New York, as well as several other jurisdictions, demonstrate that explicitly focusing on equity can strengthen the planning process. A focus on equity helps to yield a thorough assessment of needs and possible actions that can aid vulnerable populations and better prepare communities for climate effects. These jurisdictions all have equity as a guiding principle for their plans. Moreover, their plans incorporate and develop equity considerations throughout the full plan. New York's plan is notable for discussing the EJ implications of proposed actions in different sectors of society. Portland's case study further noted that although not every action directly involves equity, the way actions are implemented may implicate equity concerns.¹¹⁶

When discussing equity, it is also important for plans to consider the full range of vulnerable populations, as not every group will experience the same effects from climate change. It is

113 GOVERNOR'S COMMISSION ON CLIMATE CHANGE, FINAL REPORT: A CLIMATE CHANGE ACTION PLAN 7 (2008) http://www.vims.edu/research/units/programs/iccr/_docs/gov_commission_report.pdf.

114 OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT, THE OREGON CLIMATE CHANGE ADAPTATION FRAMEWORK 3, 17 (2010), *available at* http://www.oregon.gov/LCD/docs/ClimateChange/Framework_Final.pdf.

115 COLORADO WATER CONSERVATION BOARD, COLORADO CLIMATE PLAN: STATE-LEVEL POLICIES AND STRATEGIES TO MITIGATE AND ADAPT 30 (2015), *available at* <http://cwcbweblink.state.co.us/WebLink/ElectronicFile.aspx?docid=196541&searchid=243b8969-739b-448c-bd2d-699af9b7aea0&dbid=0>.

116 WILLIAMS-RAJEE & EVANS, *supra* note 55, at 15.

essential to consider communities of color that have historically faced disparities, as well as low-income communities. At the same time, plans should consider other groups, including but not limited to environmental justice communities, individuals with disabilities, the elderly, LEP individuals, and immigrants and refugees. Additionally, plans should consider how geography might affect vulnerability to climate change. Explicitly mentioning a wide range of vulnerable populations will enhance the ability of climate plans to help achieve environmental justice.

The concept of equity in climate plans should be broad as well. Climate equity considerations are not just limited to mitigating the negative effects of climate change. Climate equity can also involve ways to leverage the opportunities from climate change planning. Indeed, increasing resilience and other climate measures may be a way to create jobs and increase investment in housing, transit, infrastructure, and neighborhood amenities that will improve opportunity for vulnerable populations. Boston's climate plan is an example of a plan that explored how implementing climate adaptation measures could increase economic development as well as community investments.

Community Input

Entities developing climate adaptation plans should ensure that they integrate the perspectives of vulnerable communities during the planning process. Input from stakeholders is crucial to ensuring that the priorities of vulnerable communities are taken into account, and may enhance later public education and outreach efforts during the implementation of climate preparedness efforts. Several plans illustrate strong community engagement processes that helped shape how equity was discussed. In Portland, the community engagement process for the Climate Action Plan involved the creation of an Equity working group comprised of representatives of six community-based organizations advocating for low-income people and communities of color as well as professional planning staff.¹¹⁷ This working group helped to provide perspectives that created a plan with a greater equity focus. The working group developed a common understanding of the group's role and a shared concept of equity. New York convened a technical working group that included representatives from environmental justice groups and non-governmental organizations.¹¹⁸ More states and localities should consider forming formal working groups that include representation from such groups and consider other forms of collaboration with community organizations that represent the interests of a broad set of vulnerable populations.

Metrics

Concrete metrics can help ensure that equity is considered during the development and implementation of a plan. Portland in particular stood out for its commitment to developing metrics to track the extent to which equity considerations were integrated into the plan. The

117 *Id.* at 6.

118 NEW YORK STATE CLIMATE ACTION COUNCIL, *supra* note 69, at 11-1.

City used feedback from its Equity Working Group to create nine different equity considerations to assess whether equity concerns were integrated into each proposed action in the plan.¹¹⁹ Additionally, the City has pledged to develop metrics to measure how well equity concerns are being addressed as plan actions are executed.¹²⁰ Other municipalities and states should consider developing similar metrics.

Goals

Another best practice to incorporate equity into climate planning is to allow goals to inform specific action proposals. Initially, Portland's planning process attempted to address equity by asking members of the equity working group how specific actions implicated equity. This process hindered the effectiveness of the group. Instead, the City shifted to ask participants what outcomes they wished to see and what challenges their communities faced. This change in approach allowed for more meaningful feedback that ultimately shaped the equity considerations that city planners used to assess actions in the Climate Action Plan.¹²¹

Coordination with Housing

There is also a strong need for climate adaptation plans to address related issues, including housing policies. HUD's adaptation plan illustrated that housing will be seriously impacted by climate change. However, climate plans often do not consider the implications of climate change on fair housing issues. As discussed earlier, HUD's Climate Adaptation plan offers several specific suggestions. Some key recommendations that should be adopted include: developing guidance on sustainability and resilience for buildings, providing training on fair housing issues that emerge after natural disasters, identifying vulnerable publicly supported housing, and drafting a set of principles for managing climate-related relocation equitably. To remedy the lack of coordination between climate and fair housing planning, localities and states should also consider including PHAs in their climate planning process. Additionally, jurisdictions should evaluate how climate change related disasters and relocation might affect the supply of affordable housing in communities, as well as patterns of segregation.

The AFH process, initiated in 2015, offers an excellent opportunity to link climate planning efforts with fair housing. Participants completing AFHs are required to use data and community input to evaluate the underlying causes of fair housing issues and then develop fair housing goals and strategies to address them. One portion of the assessment specifically requires participants to examine environmental health as part of an overall analysis of access to opportunity. Other parts of the AFH explore barriers to fair housing, demographics, and the location and types of affordable housing in an area. The AFH process is still in its early stages but it has great potential to inform climate change planning as well as public health and land-use plans.

119 WILLIAMS-RAJEE & EVANS, *supra* note 55, at 12.

120 *Id.* at 7.

121 *Id.* at 11.

V. Conclusion

Climate change will have serious implications for equity in all communities across the country. Vulnerable populations are likely to experience the brunt of the impacts of climate change in a wide variety of ways, from housing to transportation to health, and are less likely to have the capacity to adapt to such impacts. Therefore, it is crucial that jurisdictions integrate equity considerations into the climate planning process to address this emerging issue. Considering equity will strengthen our collective climate response and help promote health, security, and opportunity for all.

*Further Reading: Selected Sources*¹²²

BOUNCE FORWARD: URBAN RESILIENCE IN THE ERA OF CLIMATE CHANGE (Island Press and the Kresge Foundation 2015)¹²³

This source is a strategy paper about urban resilience. It suggests that because the majority of people now live in urban areas, it is essential to focus on cities in planning efforts to combat climate change. Since most population growth is now concentrated in cities, the expansion of public transportation will reduce auto dependency and thus, reduce the carbon footprint.

Rudolph L, Gould S, Berko J., **CLIMATE CHANGE, HEALTH, AND EQUITY: OPPORTUNITIES FOR ACTION** (Public Health Institute 2015)¹²⁴

This report on the intersection of health and climate change describes how public health organizations can participate in climate change planning processes. It states that public health organizations often serve communities most vulnerable to climate change, and identifies how they can be used to mobilize residents and resources to address climate change and prepare for its impacts.

Melissa Deas, Jessica Grannis, Sara Hoverter, and Jamie DeWeese, **OPPORTUNITIES FOR EQUITABLE ADAPTATION IN CITIES** (Georgetown Climate Center 2017)¹²⁵

This source is a report from the Georgetown Climate Center on opportunities for equitable adaptation in cities. It explains how the effects of climate change will disproportionately affect low-income people and communities already facing substantial economic and social challenges. It focuses on how urban sustainability requires a long term commitment at an institutional level, and not a project based one. The report suggests ways that cities and public agencies can address inequality within their own agencies as well as how they can direct

122 Thanks to Carrie Zaremba, PRRAC summer research assistant, for this compilation.

123 Available at <http://kresge.org/sites/default/files/Bounce-Forward-Urban-Resilience-in-Era-of-Climate-Change-2015.pdf>.

124 Available at: www.phi.org/uploads/application/files/h7fjouo1i38v3tu427p9s9kcmhs3oxsi7tsg1fov3yesd5hxxu.pdf.

125 Available at: www.georgetownclimate.org/files/report/GCC-Opportunities_for_Equitable_Adaptation-Feb_2017.pdf.

resources to areas and groups facing the highest risk. There is a section on affordable housing, which highlights key points such as ensuring that structural improvements do not compromise affordability. The report further describes how the building stock in lower-income communities is often more vulnerable to the effects of climate change because these properties may be located in areas prone to natural hazards and underinvestment.

Rosa Gonzales, **COMMUNITY-DRIVEN CLIMATE RESILIENCE PLANNING: A FRAMEWORK** (NACRP 2017)¹²⁶

This report by the National Association of Climate Resistance Planners highlights the need for a community-driven planning process to create stronger climate resilience solutions. Its premise is that residents of communities most vulnerable to the effects of climate change have relevant, direct experience and information that may not be present in the planning processes by government agencies. The source states how increasing the capacity for self-governance, and ensuring that civic responsibility and leadership are widely distributed is essential for building resilient communities. The report provides an example of this power building in Richmond, California, whose predominately low-income communities of color have been exposed to health hazards from the nearby Chevron refinery. There, a multi-stakeholder coalition called Our Power Richmond was formed to incorporate residents into decision-making processes affecting their communities.

Tina Yuen, Eric Yurkovich, Lauren Grabowski, and Beth Altshuler, **GUIDE TO EQUITABLE, COMMUNITY-DRIVEN CLIMATE PREPAREDNESS PLANNING** (USDN 2017)¹²⁷

This report prepared by the Urban Sustainability Directors Network identifies characteristics of an equitable, community-driven climate preparedness planning process, including identifying inequities, engaging with impacted communities, promoting democracy and transparency in government, fostering sustainability. The report also mentions the Racial Equity Evaluation Tool developed by Equity Matters that could be useful in climate change planning.

126 Available at: http://movementstrategy.org/b/wp-content/uploads/2017/05/WEB-CD-CRP_Updated-5.11.17.pdf.

127 Available at: www.usdn.org/uploads/cms/documents/usdn_guide_to_equitable_community-driven_climate_preparedness-_high_res.pdf.

About the Poverty & Race Research Action Council (PRRAC): Connecting Research to Advocacy

The **Poverty & Race Research Action Council (PRRAC)** is a civil rights policy organization convened by major civil rights, civil liberties, and anti-poverty groups in 1989-90. PRRAC's primary mission is to help connect advocates with social scientists working on race and poverty issues, and to promote a research-based advocacy strategy on structural inequality issues. PRRAC sponsors social science research, provides technical assistance, and convenes advocates and researchers around particular race and poverty issues. PRRAC also supports public education efforts, including the bimonthly newsletter/journal *Poverty & Race*, and the award-winning civil rights history curriculum guide, *Putting the Movement Back Into Civil Rights Teaching* (co-published with Teaching for Change). At the present time, PRRAC is pursuing project-specific work in the areas of housing, education, and health, focusing on the importance of "place" and the continuing consequences of historical patterns of housing segregation and development for low income families in the areas of health, education, employment, and incarceration. PRRAC's work is informed by an extensive national network of researchers, organizers, attorneys, educators, and public health and housing professionals.

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