Reinforcing Community Climate Resilience Through Social Cohesion: Opportunities for Local Governments in Southern California

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I. Introduction

Every year in recent memory has produced a recurring series of natural disasters. In 2021, nearly ten million people across Texas lost power for several days when a stretched polar vortex plunged the state into its deepest winter storm since 1989.[1] Unusual weather patterns in 2023 led Hurricane Hilary to become the first tropical storm to hit Southern California in 84 years.[2] Hurricanes Helene and Milton made history in 2024 by killing over 200 people[3] and wreaking catastrophic damage across the Southeastern U.S.[4] And, most recently, Los Angeles' record-breaking Eaton and Palisades Fires were fueled by climate impacts that accounted for a quarter of the area's extreme dryness, and that made fire weather conditions 35 percent more likely.[5]

These incidents are only the most recent ways in which a changing climate has made its presence felt. Society is moving past the notion of climate change as a distant, abstract threat—treating it only as, say, "Save the polar bears!" to the exclusion of all else—especially in more recent years. Between 2021 and 2022, the number of Americans who perceived climate change as a "serious, imminent threat" increased by 14 percent.[6] This may be because the consequences of climate change have solidified in the public consciousness as its impacts more directly intrude on daily life. Of U.S. adults, 78 percent reported being personally affected by one or more extreme weather events, including extreme heat, abnormally severe winter storms, drought, hurricanes, and tropical storms, between 2017 and 2022. Among the 78 percent of U.S. adults experiencing these events, 24 percent faced resulting serious health problems and 17 percent similarly faced serious financial problems.[7]

1. Bob Henson, *Climate Change May Have Worsened Deadly Texas Cold Wave, New Study Suggests*, The Wash. Post (Sept. 3, 2021), https://www.washingtonpost.com/weather/2021/09/03/climate-change-arctic-texas-cold/; Nat'l Oceanic & Atmospheric Admin., Nat'l Ctrs. For Env't Info., *The Great Texas Freeze: February 11–20, 2021* (Feb. 24, 2023), https://www.ncei.noaa.gov/news/great-texas-freeze-february-2021.

2. Ian James, *Boiling Point: Southern California's Historic Storm Shows Climate Risk*, L.A. Times (Aug. 22, 2023), https://www.latimes.com/environment/newsletter/2023–08–22/boiling-point-storm-shows-climate-risk-boiling-point.

3. Jacey Fortin et al., *The Way Hurricanes Kill is Changing. Helene Shows How.*, N.Y. Times (Feb. 4, 2025), https://www.nytimes.com/2025/02/04/us/hurricane-helene-deaths.html.

4. Haley Thiem & Rebecca Lindsey, *Hurricane Helene's Extreme Rainfall and Catastrophic Inland Flooding*, Nat'l Oceanic & Atmospheric Admin. (Nov. 7, 2024), https://www.climate.gov/news-features/event-tracker/hurricane-helenes-extreme-rainfall-and-catastrophic-inland-flooding; Alexa St. John, *Climate Change Gave Significant Boost to Milton's Destructive Rain, Winds, Scientists Say*, The Associated Press (Oct. 11, 2024), https://apnews.com/article/hurricane-milton-climate-change-greenhouse-gases-fossil-fuels-aa1c971c228feb9da6f36fb9cc46ee81.

5. Ian James, *How Climate Change Worsened the Most Destructive Wildfires in L.A. History*, L.A. Times (Jan. 16, 2025), https://www.latimes.com/environment/story/2025-01-16/climate-change-california-fires; Matt McGrath, *Climate Change Made LA Fires Worse, Scientists Say*, B.B.C. (Jan. 28, 2025), https://www.bbc.com/news/articles/cd9qy4knd8wo.

6. Jonathon Schuldt, *Public Polling on Climate Change, Briefing Series: Congressional Climate Camp*, Env't & Energy Study Inst. (Feb. 9, 2023), https://www.eesi.org/briefings/view/020923camp [https://perma.cc/74YB-ARZY].

7. Harv. U. T.H. Chan Sch. of Pub. Health, The Impact of Extreme Weather on Views About Climate Policy in the United States 8 (2022), https://www.rwjf.org/content/dam/farm/

Nevertheless, climate change is an inherently global issue. The Intergovernmental Panel on Climate Change (IPCC), for example, revealed in its 2022 Sixth Assessment Report that 3.6 billion people already live in areas highly susceptible to climate change.[8] Both the causes and effects of climate change are transboundary, reaching far beyond any given political border.

Despite these multilevel complexities—or, perhaps, because of them—there has been increasing recognition of the ways in which local policies are suitable to anticipate regional climate threats.[9] Motivation to address environmental changes is strongest where these effects are most acutely felt, given the local nature of both exposures and response.[10] A majority of Americans are worried that their local area might be harmed by climate impacts.[11] Indeed, 62 percent agree that climate change is already directly having some or a "great deal" of impact on their local community.[12] Accordingly, 57 percent of registered voters say that their local government officials should do more to address climate issues like global warming.[13]

Localities and local resilience are thus central to an effective response.[14] Studies have increasingly assessed the role of formal organizations, like local governments, in building community resilience—defined as the capacity of communities or cities to withstand, recover from, and adapt to shocks and stressors.[15] Such studies, however, tend to focus on top-down, hierarchal perspectives of government-directed resilience building that actually hinder engagement at the community level in the context of climate change adaptation.[16]

This paper, therefore, aims to identify how local governments may strengthen climate resilience by supporting bottom-up social cohesion within communities

reports/surveys_and_polls/2022/rwjf468968 [https://perma.cc/PQ5Q-Q2LU].

8. IPCC, Climate Change 2022: Impacts, Adaptation, and Vulnerability (Hans-Otto Pörtner et al. eds., Feb. 2022), https://www.ipcc.ch/report/ar6/wg2/ [https://perma.cc/3L5B-5QLW].

9. Eduardo Vega-López, Climate Change and Local Social Cohesion 21, 59–60 (Agusti Fernández de Losada et al. eds., 2018), https://www.observ-ocd.org/sites/observ-ocd.org/files/2018-04/climate-change-and-locale-social-cohesion.pdf [https://perma.cc/N89L-D7XC].

10. Jeremy J. Hess et al., *Climate Change: The Importance of Place*, 35 Am. J. Preventive Med. 468, 476 (2008).

11. Anthony Leiserowitz et al., Climate Change in the American Mind: Beliefs & Attitudes 4 (2023), https://climatecommunication.yale.edu/wp-content/uploads/2023/09/climate-change-american-mind-beliefs-attitudes-spring-2023.pdf [https://perma.cc/WW7K-3BC5].

12. Bella Isaacs-Thomas, *Climate Change is Hitting Close to Home for Nearly 2 Out of 3 Americans, Poll Finds*, PBS News (Aug. 3, 2023), https://www.pbs.org/newshour/science/climate-change-is-hitting-close-to-home-for-nearly-2-out-of-3-americans-poll-finds.

13. Anthony Leiserowitz et al., Climate Change in the American Mind: Politics & Policy, 5 (2023), https://climatecommunication.yale.edu/wp-content/uploads/2023/06/climate-change-american-mind-politics-policy-spring-2023.pdf..

14. Hess, *supra* note 10, at 476–77.

15. Esther Carmen et al., *Building Community Resilience in a Context of Climate Change: The Role of Social Capital*, 51 Ambio 1371, 1371–72 (2022); *see also* Nicole Bohrer-Kaplan et al., Social Cohesion: A Practitioner's Guide to Measurement Challenges and Opportunities 8 (100 Resilient Cities ed., 2019), https://resilientcitiesnetwork.org/downloadable_resources/UR/Social-Cohesion-Handbook.pdf [https://perma.cc/N5VG-2ADG].

16. *Id.* at 1383.

themselves. Social cohesion may be broadly characterized as a society's willingness to cooperate to achieve the shared well-being of all its members.[17] Despite having particularly good outcomes in low-income communities, social cohesion has often been overlooked as an adaptive climate resilience tool.[18] Without effective safeguards in place to protect long-term social cohesion, climate impacts will only diminish communities' ability to build social cohesion in the first place.[19] Through community-based legal and policy mechanisms that address existing social and economic problems, local governments can enshrine social cohesion frameworks as an adaptive resiliency tool for use against imminent climate impacts.

First, this paper will introduce social cohesion as a concept and the different dimensions through which it has been analyzed. Next, it will discuss the relationship between social cohesion, resilience, and climate change's amplification of barriers to building these tools—particularly in low-income and marginalized communities. Then, this paper will provide an overview of a few legal and policy approaches and recommendations that have been made in areas throughout the United States to support community social cohesion in light of climate threats. Finally, these principles will be applied to the context of current adaptation efforts in Southern California, concluding with recommendations for local governments to facilitate more robust forms of social cohesion in building climate resilience.

II. Background: dimensions and characteristics of social cohesion

Social cohesion is most often seen as an important, desirable feature of any community or society.[20] At its heart, social cohesion describes the quality of a group's sense of collective togetherness.[21] It is the "capacity of a society to ensure the well-being of all its members," including by minimizing disparities and avoiding marginalization.[22] The strength of social relationships, the presence of trust and participation among individuals, and the sense of belonging and connection felt by those individuals are thus foundational to building social cohesion.[23] This connectedness may manifest itself in the attitudes and behaviors of all individuals and groups within the given society. Social capital, social resilience, and social connectedness describe different, but overlapping and conceptually similar, common terms used in this context.[24]

17. Danielle Baussan, Social Cohesion: The Secret Weapon in the Fight for Equitable Climate Resilience 2 (May 2015), https://www.americanprogress.org/wp-content/uploads/sites/2/2015/06/SocialCohesion-report2.pdf [https://perma.cc/5WTT-HF9Q].

18. *Id.*

19. Vega-López, *supra* note 9, at 59.

20. David Schiefer & Jolanda van der Noll, *The Essentials of Social Cohesion: A Literature Review*, 132 Soc. Indicators Rsch. 579, 579–80.

21. *Id.* at 592.

22. Vega-López, *supra* note 9, at 17.

23. Bohrer-Kaplan et al., *supra* note 15, at 20.

24. Julie Early Sifuentes et al., Climate Change and Social Resilience: Findings from Community Listening Sessions 4 (2020), https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/CLIMATECHANGE/Documents/Climate%20Change%20and%20Social%20Resilience.pdf [https://perma.cc/9VR3-WRTW].

The theoretical framework of "bonding, bridging, and linking" is useful for understanding the importance of equity, social cohesion, and climate resilience. According to a report released by the Oregon Health Authority, "bonding" refers to interpersonal relationships, such as those among people with a common social background.[25] Bonding may include relationships between individuals who share a physical neighborhood, personal experiences, similar cultures, or other factors.[26] "Bridging" involves relationships across different or divided social groups within a community, such as race, class, or religion.[27] "Linking relationships" are those that individuals and community-based organizations build with organizations or government entities that possess institutional power and resources.[28] These connections across formal hierarchies implicitly acknowledge underlying power differentials.[29] An understanding of all three of these forms of social cohesion is crucial, as each form plays a role in how changes are made to the policies, systems, and environments that contribute to equity.[30]

In advancing the above forms of social cohesion, there exist various dimensions that have most commonly appeared in publications. These dimensions can be classified into two categories: structural and sociocultural. Structural dimensions include the social relations, networks, and trust among people; the equality of opportunities and of distribution of accessible resources; and the quality of life in terms of psychological well-being, physical health, and living conditions.[31] In contrast to structural dimensions, sociocultural dimensions are more subjective. They encapsulate concepts such as identification, or feelings of attachment and belonging to the place or social entity; orientation toward the common good and collective visions for the future; and shared values and social norms.[32]

Both structural and sociocultural dimensions hold value as tools to build and bolster social cohesion. Whereas structural dimensions are crucial for a community's ability to overcome climate shocks, approaches to resilience must also focus on subjective dimensions that proactively address the multifaceted uncertainties of climate change.[33] Accordingly, a cohesive society is one that is characterized by "close social relations, pronounced emotional connectedness to the social entity, and a strong orientation towards the common good."[34] Equal access to resources likewise strengthens individual trust in others and in institutions, which can facilitate a

25. *Id.* at 10.
26. *Id.*
27. *Id.* at 11.
28. *Id.* at 15.
29. Carmen, *supra* note 15, at 1375.
30. Sifuentes et al., *supra* note 24, at 6.
31. Scheifer & van der Noll, *supra* note 20, at 585–86, 591–92; Carmen, *supra* note 15, at 1375, 1380.
32. Scheifer & van der Noll, *supra* note 20, at 588–91; Carmen, *supra* note 15, at 1381.
33. Carmen, *supra* note 15, at 1380.
34. Scheifer & van der Noll, *supra* note 20, at 592.

positive sense of belonging, contribute to well-being and health, and increase general quality of life.[35]

III. The relationship between social cohesion, resilience, and climate change: a negative feedback loop in action

A. Social cohesion as a crucial adaptive tool for improving climate resilience

There are three primary ways through which social cohesion can bolster communities' resilience to climate threats. The first concerns "reactive resilience": a more cohesive society is better able to survive and cope with the effects of a climate shock, both while it occurs and in its immediate aftermath.[36] During extreme weather events, community members' ability to turn to each other for help can minimize loss of life and property damage, and contribute to later rebuilding efforts.[37] Residents and organizations in well-connected communities, for example, have better capacity to assist with supplies, help prevent displacement when government support is lacking, identify local recovery needs for government officials, reach out to one another to regroup, and direct efforts toward the community's most vulnerable residents.[38] Reactive resilience emphasizes goals of absorbing disturbance, reducing damage, self-organizing, and restoring business-as-usual normality or stability.[39] At the same time, interpretations of this version of resilience have often assumed the need for top-down command and control, or for independent actions undertaken by local residents without government support.[40]

Second, social cohesion can also advance "responsive resilience" to a climate impact before the next stressor occurs. This relates to a community's ability to continuously learn from the weaknesses exposed by shocks. By doing so, the community can enact social, environmental, or physical adaptations in preparation for future events.[41] Compared to reactive resilience, responsive resilience is more multifaceted in that it encompasses different actors, interests, and capacities in an ongoing process to strengthen the existing system.[42] Here, higher levels of trust and goodwill among community members (bonding) or networks of multiple communities (bridging) enables them to work together for disaster preparation ahead of time, ultimately mitigating its worst impacts.[43] Increased social cohesion can accomplish this where residents educate and engage in information sharing with one another, map low-income and especially vulnerable parts of a community, identify their unique

35. *Id.* at 594.
36. Carmen, *supra* note 15, at 1374; Baussan, *supra* note 17, at 3.
37. Bohrer-Kaplan et al., *supra* note 15, at 26.
38. Baussan, *supra* note 17, at 3; Bohrer-Kaplan et al., *supra* note 15, at 24.
39. Vega-López, *supra* note 9, at 50; Carmen, *supra* note 15, at 1377.
40. Carmen, *supra* note 15, at 1374.
41. *Id.*; Vega-López, *supra* note 9, at 16, 59–60.
42. Carmen, *supra* note 15, at 1374.
43. Bohrer-Kaplan et al., *supra* note 15, at 23–26.

and localized challenges for government programs, and assist government officials in appropriately arranging for evacuations and other disaster planning (linking).[44]

Lastly, "proactive resilience" deals with an ongoing process of "foresight, experimentation, reflection, and learning" that is focused on interconnections, systemic perspectives, and multi-scalar approaches.[45] It emphasizes the influence of existing governance arrangements and power dynamics, as well as opportunities for alternative ways of thinking and acting.[46] Proactive resilience places greater emphasis on the deeper underlying causes of the challenges in a given community, which influence approaches that might be adopted to strengthen resilience.[47] Given that climate change interacts with multiple social levels in various and dynamic ways, this system-oriented approach is particularly important for addressing current and future climate challenges.[48] Government-supported social cohesion in this area can be accomplished through the recognition of experienced historical mistreatment, distrust of authorities, and inequitable access to or distribution of resources in disadvantaged communities.[49]

Although all three forms of resilience are crucial for adaptation efforts, most studies have overlooked proactive resilience.[50] Yet climate resilience should not center on returning to some "ideal" state. There is overwhelming evidence that it is less costly environmentally, socially, and economically to introduce evolving, localized adaptation measures than to forever maintain the status quo.[51] Resilience should instead comprehensively address challenges at their roots to best foster transformative, sustainable trajectories of inclusion and equity far into the future.[52]

B. Climate change exacerbates barriers to building social cohesion

Despite the importance of social cohesion as a tool for strengthening resilience, climate impacts both create new and amplify existing challenges to cohesion building. When a stressor strikes, the subsequent scarcity of natural resources and environmental services results in a failure to meet people's daily needs.[53] This opens the likelihood of rising social conflicts where community members must compete for access to scarce external support. One instance of this occurs where tensions arise among community-based organizations (CBOs) that serve the same community. If a CBO has limited or complicated access to public funding, competitive relationships arise as residents' become less willing to collaborate.[54] These tensions surrounding the distribution of resources lead to long-term losses of bridging and

44. Baussan, *supra* note 17, at 2, 10.
45. Carmen, *supra* note 15, at 1375.
46. *Id.*
47. *Id.* at 1377.
48. *Id.* at 1375.
49. Baussan, *supra* note 17, at 11.
50. Carmen, *supra* note 15, at 1574.
51. Vega-López, *supra* note 9, at 45.
52. Sifuentes et al., *supra* note 24, at 24; Carmen, *supra* note 15, at 1376.
53. Vega-López, *supra* note 9, at 121.
54. Sifuentes et al., *supra* note 24, at 23.

linking connections—such as those between households or aid organizations—making it more difficult to solidify norms of community support.[55] During the Chicago 1995 heat wave, for example, higher death risks from heat-related illnesses were most concentrated in low-income or high-poverty neighborhoods. However, some of the neighborhoods with the lowest rates of actual heat-related deaths were low-income, African American communities. This was attributed in part to their high levels of bonding cohesion that decreased isolation among residents during and after the crisis.[56]

Displacement of a community and its residents directly weakens their capacity for cohesion in numerous ways. Combined with local social connections, one's attachment to place is also a significant predictor of civic involvement.[57] Place attachment promotes a social identity that is associated with positive attitudes toward sustainability and concern for local environmental issues.[58] Conversely, displacement then undermines a community's ability to engage with various threats by compromising community engagement and resilience. Residents who must evacuate their homes often rely on their personal networks of friends and family to find temporary shelter, leading to many unreported instances of displacement.[59] Statistics on displacement also tend to exclude communities that are gradually displaced due to climate changes, such as persistent drought or flooding, as opposed to sudden weather events.[60] But because climate impacts can fundamentally alter a place's ecology, a culture loss that disrupts community members' identification with a place can arise even if residents are not physically displaced or forced to migrate.[61]

The effects of displacement are particularly salient in low-income communities. Public or affordable housing units are more vulnerable to extreme weather and are often located in areas that are more likely to experience extreme weather.[62] Public housing units are also often slow to be rebuilt once destroyed.[63] When a lack of affordable housing forces communities to separate, uprooted residents may be unlikely to return to that community even if housing is eventually rebuilt.[64] For communities that do temporarily migrate elsewhere in the wake of a climate event, civic tensions may arise between displaced residents and residents in the host community. Strains on rising rent prices, housing, and other resources in the host community increase the burden of social problems like homelessness and isolation that inhibit bridging.[65]

55. Carmen, *supra* note 15, at 1379.
56. Baussan, *supra* note 17, at 1–2.
57. Hess, *supra* note 10, at 476.
58. *Id.*
59. Raina Hasan, *Weathering the Storm: Establishing Internally Displaced People's Right to Affordable Housing in the Wake of Natural Disasters*, 31 J. L. & Pol'y 177, 190 (2022).
60. *Id*.
61. Hess, *supra* note 10, at 475.
62. Baussan, *supra* note 17, at 5.
63. *Id.*
64. *Id*.
65. Sifuentes et al., *supra* note 24, at 20–21, 25.

Hurricane Katrina exemplified these issues. Over the course of a week, nearly 230,000 Gulf Coast residents were displaced into evacuation centers in Louisiana and several surrounding states.[66] Property owners were then incentivized to convert destroyed or damaged affordable housing properties into higher-priced luxury apartments.[67] For example, New Orleans had 5,146 households living in low-income public housing before the hurricane, but the city had less than half that amount eight years after the storm.[68] Houston, Texas, received an estimated 250,000 displaced residents, leading to increased attitudes of hostility and racism toward evacuees. At the same time, only 11 percent of the 3,077 families living in New Orleans' four largest public housing developments returned to the complexes once they were eventually rebuilt.[69] However, an estimated 90 percent of New Orleans' prominent Vietnamese population returned to New Orleans within two years of Katrina. This was largely due to their highly cohesive network of bridging connections with Houston's Vietnamese community, which supported the needs of almost 9,000 lower-income residents by organizing outreach, relief, and supplies.[70]

Climate impacts similarly prevent social cohesion through obstacles related to economic vulnerabilities. Extreme weather, for example, worsens the energy inefficiencies and high costs low-income communities already face.[71] Severe storms, floods, and droughts can create difficulties through job losses and limited access to social services when businesses close or lay off workers, transportation becomes limited, or electrical outages occur.[72] Implications on food scarcity and affordability compound with housing and economic insecurity to ensure that residents are wholly unable to prepare for any climate impacts or other natural disasters. In these circumstances, stocking up on water, food, and supplies in the event of an emergency becomes a luxury for those who have the requisite time and money.[73] Residents dealing with these interlacing issues can end up feeling stretched too thin or having too many responsibilities to afford spending any additional time helping their fellow community members or creating and maintaining social connections.[74]

Existing norms of discrimination and polarization also present barriers to both bridging and linking forms of social cohesion. Across different social groups, racism and socioeconomic class can bring divisiveness where groups with more social or financial capital do not have empathy for those who experience common hardships.[75] In some communities, interpersonal discrimination perpetuates decreased community

66. Hess, *supra* note 10, at 470-71.

67. Alexandra Votaw, *Killing Two Myths with One Stone: How the Public Trust Doctrine Can Improve Climate Resiliency by Stopping Gentrification*, 34 Geo. Env't L. Rev. 497, 505 (2022).

68. Baussan, *supra* note 17, at 5.

69. *Id.* at 5, 17.

70. *Id.* at 16.

71. *Id.* at 5, 17.

72. *Id.* at 6–7.

73. Sifuentes et al., *supra* note 24, at 22.

74. *Id.* at 22–23.

75. *Id.* at 11–12, 24–26.

and civic engagement.[76] This interpersonal discrimination can manifest as a wide fear of deportation, language barriers, or a lack of training and education.[77] Similarly, when CBOs lack motivation to collaborate with one another and bridge diverse populations together, each individual community ends up much more isolated than they might be otherwise.[78]

The conduct of local formal organizations, like government agencies, further erodes cohesion where they reduce community trust. Institutions and people in power do so through systemic oppression, structural racism, and top-down approaches that fail to create sufficient space for communities to engage in decision-making processes.[79] Formal organizations may also erode cohesion where perceived injustices in their practices, such as the inequitable distribution of resources, exacerbate tensions between communities themselves.[80] The consequences of climate impacts, including competition mindsets, scarcity of resources, and burdens associated with displacement, can serve to solidify these combative norms.

Fundamentally, increasing present and future risks posed by climate change will exploit numerous opportunities to prevent cohesion building. Without social cohesion, community resilience to climate change is inevitably dampened. And without resilience, communities are hit even harder by the consequences of climate impacts when they do occur, eroding their connections further. This negative feedback loop will continue unless external institutional support is provided to break the cycle.

Preemptively bolstering social cohesion to tackle the "additional" problems that are generated by climate risks, however, is much more difficult when persisting structural or emerging social problems have not yet been systematically addressed.[81] As a result, adaptation must center around the eradication or limitation of the social, demographic, and economic vulnerabilities to climate change in each specific territorial situation and location.[82] Socially degrading and exclusionary circumstances are antithetical to this purpose.[83] Rather, the dire need for building social cohesion requires the reduction of local levels of marginalization, disorganization, and social erosion.[84]

Promoting social cohesion is, of course, the responsibility of all sectors of society.[85] Be that as it may, these inequities necessitate that those with power and resources bear the greatest responsibility to engage with communities against

76. *Id.* at 29–31.
77. *Id.*
78. *Id.* at 27.
79. *Id.* at 28.
80. *Id.* at 29; Carmen, *supra* note 15, at 1382.
81. Vega-López, *supra* note 9, at 59.
82. *Id.* at 45.
83. *Id.* at 65.
84. *Id.* at 58, 69, 122.
85. *Id.* at 21.

impending climate threats.[86] This task must be first guaranteed by local governments, whose institutions most directly and instantly impact communities.[87]

IV. Responsive law and policy mechanisms to bolster social cohesion and climate resilience

In jurisdictions across the United States, municipalities have stepped up to address systemic barriers to social cohesion through a variety of approaches. This section provides a non-exhaustive overview of strategies that local governments can apply to solidify long-term social cohesion frameworks that increase communities' adaptive capacities. These strategies can be broadly grouped into two categories: collaborative governance arrangements and zoning and land use policies (though as this paper will discuss, the two often can—and should—operate in overlapping ways).

A. Moving toward models of collaborative governance

Both historically and in the present day, local governments often operate behind a curtain of formal, one-way methods of public participation. Such top-down, hierarchal approaches like public comment periods or hearing sessions severely limit the potential for exchanges between officials and citizens or interactive community questions.[88] Even when well-intended, the use of top-down governance in social systems with deeply embedded inequality fails to build cooperation, trust, problem-solving, and networks within and between neighborhoods; fails to empower marginalized residents; and fails to address community-defined needs.[89] Establishing resilience in vulnerable communities thus requires systems-based changes to institutional governance arrangements, until they actively seek out, include, and engage low-income neighborhoods of color.[90] At the other end of the spectrum, bottom-up approaches may involve the exclusive use of community-provided infrastructure as a cultural common. These approaches could also include devolving power from the public to the private sector, such as through private partnerships or exclusive reliance on privately-owned infrastructure with some community benefits.[91]

Collaborative governance, or "co-governance," functions as a hybrid model—a middle ground between two extremes. On one hand, top-down, government-oriented reforms might simply improve participatory decision-making processes or increase equitable distribution of government-provided infrastructure.[92] On the other hand, exclusively bottom-up approaches may allow governments to offload

86. Sifuentes et al., *supra* note 24, at 6.

87. Vega-López, *supra* note 9, at 21.

88. Palma J. Strand, *Cultivating "Civity": Enhancing City Resilience with Bridging Relationships and Increased Trust*, 50 Idaho L. Rev. 153, 187–88 (2014).

89. Craig A. Arnold et al., *Resilience Justice and Community-Based Green and Blue Infrastructure*, 45 Wm. & Mary Env't L. & Pol'y Rev. 665, 668–69 (2021).

90. *Id.* at 685–86, 693.

91. *Id.* at 670.

92. *Id.* at 669–70.

their responsibilities onto communities that have limited resources.[93] Co-governance instead funnels attention toward community social capital by integrating top-down government resources, policies, expertise, and legal authority with bottom-up neighborhood-based organizing, local expertise, and grassroots power.[94] The below sections will provide several examples of these methods in more detail.

Citizens feel like their voices genuinely matter when local governments respect processes of meaningful civic engagement, increasing trust and linking.[95] As a result, providing this platform can motivate people to feel more driven to use their voices in the first place.[96] Local governments have the opportunity to increase communities' orientation toward acting for the common good, social norms of collaboration, and their identification with place.

1. Expanding the roles and capacity of CBOs

Community organizations are particularly well-suited to implementing and stewarding local interventions that complement larger government infrastructure investments.[97] Nonprofit organizations that are committed to community development can uniquely build resilience and capacity outside of the formal government structure through their ability to fill leadership vacuums, adapt to meet communities' changing recovery needs, and bridge knowledge gaps.[98]

a. Formal power-sharing arrangements

Municipalities can create transformative co-governance arrangements with CBOs by vesting these entities with formal grants of shared decision-making authority at local or neighborhood levels, or through formal partnerships to accomplish specific goals.[99] In doing so, governments should make substantial investments of their financial resources, staffing, and other support, and collaboratively create arrangements that specify the relative responsibilities, duties, liabilities, and resource commitments of all participants.[100]

The comprehensive Climate Justice Plan created by the city government of Providence, Rhode Island, does exactly that. When creating this plan in 2019, the City's Office of Sustainability and its Racial and Environmental Justice Committee wholeheartedly recognized that the legacy of pollutants from the city's industrial past necessitated systems-level, place-based changes to local governance.[101] They set out

93. *Id.* at 670, 698–99.

94. *Id.* at 670, 693, 699.

95. Strand, *supra* note 88, at 188.

96. Zachariah Sullivan, *Bringing Community Mindfulness to Green Infrastructure Flooding Solutions in Detroit*, 68 Wayne L. Rev. 601, 617-18 (2023).

97. Louise Yeung et al., Social Cohesion as a Climate Strategy: Reflections on Superstorm Sandy 13 (Oct. 2022), https://comptroller.nyc.gov/wp-content/uploads/documents/Social-Cohesion-as-a-Climate-Strategy.pdf [https://perma.cc/QMB9-2RWS].

98. Edith Hannigan, *Using Pre-Disaster Community Capacity to Address Land-Use Post-Wildfire*, 55 Idaho L. Rev. 29, 42, 54 (2019).

99. Arnold et al., *supra* note 89, at 697, 711, 724.

100. *Id.* at 728.

101. The City of Providence's Climate Justice Plan 7–8 (2019), https://www.providenceri.

to address this first through a formal agreement on a community-centered process that would guide the creation of the plan. The city provided community-led education and training so that residents had the necessary resources and information needed to make decisions. They then identified key priorities and concerns through peer-led interviews of frontline community members.[102] Next, the city designed solutions that responded to those priorities, provided community members with comprehensible visualizations of these proposals, and further refined these policies based on feedback to meet community needs in a Providence-specific context.[103]

The planning process of the Climate Justice Plan additionally utilized a set of guiding principles and values called the Just Providence Framework, which frontline community members developed themselves. These values included, among many others, an explicit acknowledgment of the importance of co-creating and co-leading governance with frontline communities of color to protect self-determination and ensure equitable access to resources, information, and power.[104] The framework also recognized fundamental rights to quality of life and liberty; to living free from discrimination and oppression; and to land, water, and food sovereignty.[105]

Following these empowerment processes, the Climate Justice Plan produced numerous strategies for specific actions responding to community priorities in a variety of subject areas, including separate sections for collaborative governance and accountability, housing, community health, local and regenerative economy, clean energy, and transportation.[106] Every action within the plan identified key partners, including organizations, institutions, or groups, that the Office of Sustainability would formally seek to work with for successful implementation.[107]

Likewise, the Office of the New York City Comptroller released a report detailing recommendations for actions to support the roles of CBOs in bolstering social cohesion as a tool for climate resilience. This report reflected the priorities and urgent needs of numerous CBOs that, in the years since Superstorm Sandy, felt they were not meaningfully included in local policy decision-making due to traditional top-down, government-driven processes.[108] The Office first recommended that the City move from models of community input or consultation to collaborative governance by institutionally embedding community members and their expertise into community-driven climate planning.[109] While many CBOs did initially develop their own long-term climate resiliency plans to address their communities' specific needs

gov/wp-content/uploads/2019/10/Climate-Justice-Plan-Report-FINAL-English-1.pdf [https://perma.cc/9JMV-GUYN].

102. *Id.* at 18–19.
103. *Id.*
104. *Id.* at 20.
105. *Id.*
106. *Id.* at 23.
107. *Id.*
108. Yeung et al., *supra* note 97, at 13–14.
109. *Id.* at 14.

and guide advocacy efforts following Superstorm Sandy, these plans received little formal municipal support or resources to advance their implementation.[110]

The report also recommended that the City institutionalize the roles of CBOs in climate disaster preparedness and response by establishing community preparedness programs and on-call emergency contracts with these groups.[111] This would provide a guaranteed amount of base funding for CBOs to conduct ongoing outreach and education programs regarding emergency awareness, in a manner designed to meet each community's own culture, character, and needs.[112] During and after disasters, emergency contracts with the City would increase CBOs' capacity to canvas potentially vulnerable neighbors, inform local officials about residents' needs for safety and shelter, coordinate food distribution efforts, and connect community members with housing, financial, and legal assistance.[113] By sharing actions and resources with residents and supporting them in developing their own emergency plans, CBOs could effectively buttress themselves as trusted local entities and strengthen social cohesion for their respective community.[114]

Other governmental entities, such as the Oregon Health Authority, have also recommended that local governments look for opportunities to share power by resourcing community groups and members to engage in public processes that influence priorities, regulations, and other decision-making.[115] This would involve incorporating strategies that build social cohesion or capital into community engagement planning and recognizing the respective dynamics and characteristics among different social groups.[116] Such initiatives are being readily adopted in cities like Paris, where government programs focus on the improvement of urban infrastructure and facilities in disadvantaged districts. These experiences led to the formalization of the city's Urban Contracts on Social Cohesion.[117]

But introducing formal power-sharing arrangements requires municipal governments to relinquish power in the first place. Letting go of this control to vest meaningful power into communities themselves is one of the most difficult barriers to justice-driven co-governance.[118] Local officials would need to stick to decision-making commitments that require an openness to policies or processes that they may at first resist.[119]

This, of course, is easier said than done. Especially in areas with long histories of embedded segregation or discrimination, whether conscious or not, alternative perspectives on approaches within formal organizations are rare.[120] Even if these

110. *Id.* at 10.
111. *Id.* at 16.
112. *Id.* at 16–17.
113. *Id.*
114. *Id.* at 17.
115. Sifuentes et al., *supra* note 24, at 37–38.
116. *Id.* at 38.
117. Vega-López, *supra* note 9, at 96.
118. Sullivan, *supra* note 96, at 617.
119. Strand, *supra* note 88, 188.
120. Carmen, *supra* note 15, at 1383.

governments were to enact such changes, communities that distrust authorities due to their exclusionary policies may be hesitant to engage with or trust them. Both internal and external pressure on local authorities is crucial for seeing these structural changes through to fruition.

b. Funding, training, and technical assistance

Given that community organizations often have limited resources and staff, local governments can also directly expand the capacity of these groups. Providence's Climate Justice Plan, for example, relied on a community resourcing strategy that explicitly committed to hiring CBOs and local businesses.[121] The plan additionally supported participating community leaders' basic needs by accommodating meeting times, providing interpretation and translation services, and giving stipends that could cover necessities like food and childcare.[122] More formally, the plan also included a policy of utilizing funds from local revenue sources—such as savings from municipal energy efficiency or renewable energy projects, and increased import fees on fossil fuels—to provide dedicated funding streams to CBOs.[123] These funds would be distributed through a collaborative governance model, where a community-centered decision-making process would designate funds to support the implementation of resilience projects.[124]

The report from the Office of the New York City Comptroller similarly recommended that the City dedicate flexible, streamlined funding for CBOs to implement community-defined resiliency strategies.[125] These resiliency strategies could be developed by offering comprehensive training programs, tailored to CBOs' needs, to help them integrate climate preparedness and resilience into their services.[126] Moreover, the City could provide technical assistance to help CBOs' limited staff learn how to secure permits, write grants, navigate complex and resource intensive funding application processes, or assess the feasibility of various community projects.[127] Along these lines, the Oregon Health Authority similarly recommended that local governments provide accessible and relevant climate funding to vulnerable communities.[128] The Oregon Health Authority also recommended that accommodations, such as interpretation services and intercultural communications, be provided at advisory and community meetings.[129]

As with models of collaborative governance, traditional structures of power may make this difficult to achieve. Governments may be reticent to provide or dedicate this support to CBOs and communities because they will not have complete control over the resulting outcomes. Limited public funds could likely be cited as

121. The City of Providence's Climate Justice Plan, *supra* note 101, at 31.
122. *Id. at* 35.
123. *Id.* at 36, 56.
124. *Id.* at 36–37.
125. Yeung et al., *supra* note 97, at 15.
126. *Id.* at 18.
127. *Id.* at 15, 18.
128. Sifuentes et al., *supra* note 24, at 37.
129. *Id.*

a reason to resist investing in such programs. In this event, federal or state grant programs may be necessary to incentivize municipal action. Local governments would otherwise need to restructure their established budgeting priorities and allocation of funds, which could lead to public resistance if resources are taken away from other publicly desirable programs.

2. Resilience hubs

Resilience hubs are another co-governance opportunity for local governments to increase community social cohesion and climate resilience. One example of resilience hubs can be seen from Providence's Climate Justice Plan, which created Green Justice Zones. These zones were to serve as a co-governance model that would provide resources to support historically disinvested, pollution-overburdened communities in developing long-term climate resilience and adaptation plans alongside City officials.[130] All Green Justice Zones would include resilience hubs—established, trusted facilities to be used year-round as accessible neighborhood centers and safe spaces for community-building activities.[131] Hubs would be led and managed directly by community members, CBOs, or faith-based groups and supported by local government and other partners.[132]

Not only would resilience hubs be used to support residents and coordinate resource distribution and services before, during, and after natural hazard events, but they would also improve access to health-focused initiatives and increase the effectiveness of community-centered programs.[133] As a result, resilience hubs support neighborhood revitalization by providing resources for residents to enhance their own individual capacities, as well as support and strengthen their neighborhood and neighbors.[134] According to the Oregon Health Authority, certain safe and high-quality community gathering places—including parks, community buildings, schools, and cultural and sporting event centers—can also bridge across social groups.[135]

Under the New York City Comptroller's recommendations, local governments could work directly with communities to design and designate hubs across neighborhoods.[136] These hubs would provide safe places for residents during emergencies, and host programs for climate education, workforce development, disaster training, health and wellness education, and more according to community needs. Municipalities could safeguard CBOs' physical spaces by directly implementing protective standards such as flood-proofing measures, resilient heating and cooling systems, and other sustainable building designs.[137]

130. The City of Providence's Climate Justice Plan, *supra* note 101, at 34–35.
131. *Id.* at 57.
132. *Id.*
133. *Id.*
134. *Id.*
135. Sifuentes et al., *supra* note 24, at 38.
136. Yeung et al., *supra* note 97, at 18.
137. *Id.* at 18–19.

These features could also be combined with community-owned energy or telecommunications infrastructure. Before Superstorm Sandy, the CBO Red Hook Initiative designed and installed its own mesh Wi-Fi network in its local community, supported by solar-powered backup systems that could withstand strong storm conditions. This network ended up becoming the communications backbone of the entire neighborhood in the days following the storm. Federal officials boosted the broadband connection of this community network, and the CBO now provides free resilient internet access across the neighborhood.[138] Microgrids in critical community spaces like schools, elder care facilities, and community centers were a similar strategy detailed in the Providence Climate Justice Plan to enable local energy generation, add capacity and stability to the larger grid, and operate independently at times.[139]

Resilience hubs ultimately provide opportunities for residents to bolster their social relations, access resources, improve their health and quality of life, and strengthen their identification and attachment to place. Local governments can thus directly contribute toward a safe space that builds community power and leadership—thereby fostering greater social cohesion and instituting long-term community resilience.

3. Green infrastructure

The addition of green infrastructure presents another opportunity for co-governance. Green infrastructure is composed of the natural or biotic aspects of human environments, ecosystems, and landscapes, including parks, trees, waterways, and more.[140] Like resilience hubs, green infrastructure can provide climate benefits in both urban and rural communities. This may include mitigating the effects of urban heat island and flooding, or providing spaces for community gatherings and pedestrian activity, which allows for the maintenance of social connections, a sense of place in the community, and positive neighborhood interactions.[141]

To integrate collaborative governance into projects that aim to develop or increase green infrastructure, local governments should be mindful of basing such developments on communities' existing needs, desires, and identities. Where political authorities instead impose ideals of what they think the community should look like, such as by emphasizing aesthetics and art features rather than infrastructure prioritizing community culture or socialization, the neighborhood may be placed at greater risk of gentrification.[142] Municipalities can avoid these pitfalls by limiting their own control of green infrastructure through express agreements, ordinances, regulations, or other policies for shared governance or management with community residents and organizations.[143]

138. *Id.* at 9.
139. The City of Providence's Climate Justice Plan, *supra* note 101, at 34.
140. Arnold, *supra* note 89, at 671–74; Sullivan, *supra* note 96, at 607.
141. Arnold, *supra* note 89, at 677.
142. Sullivan, *supra* note 96, at 610, 616, 618.
143. Arnold, *supra* note 89, at 725.

This model is exemplified by the Parkland Community Garden, which was formed by neighborhood residents in Louisville, Kentucky in 2013. There, seven residents were elected to form the garden's core planning group.[144] The group worked with the Louisville Metro government to develop a license agreement that would grant them rights to use vacant urban-renewal land. They received various education, technical, and community organizing support from the Jefferson County Extension Service, University of Louisville Center for Environmental Policy and Management, and the Network Center for Community Change.[145] After 45 families and over 400 volunteers participated in its first year, the garden's success has led to plans for the construction of a community-driven cultural and green space to be developed adjacent to it.[146]

Both Providence's Climate Justice Plan and the New York City Comptroller's recommendations include similar strategies to partner with CBOs for the development of personalized, community-managed green spaces and infrastructure in frontline communities. Through community gardens and native plantings, these strategies aim to effectuate cooling effects, electricity savings, health benefits, educational opportunities, and food security for residents.[147]

At the same time, green infrastructure must be accompanied with anti-displacement strategies that integrate community engagement, affordable housing, job training and creation, and support for small businesses.[148] The Climate Justice Plan, for example, included actions to employ community members in the stewardship of green spaces; provide training and job opportunities for residents in weatherization, energy efficiency, electrification, and on-site renewables; and ensure renter protections whenever basic health, safety, or energy efficiency improvements are made.[149] Similarly, the Red Hook Wi-Fi system in New York City utilized a workforce development program that provided digital and technological training to young adult community members, who would then be paid to install and maintain these networks.[150] In sum, co-governance strategies work most effectively when paired with mechanisms that keep local residents involved at every level.

B. Utilizing the potential of zoning and land use policies

Every municipal land use decision can implicate community climate resilience.[151] But because participation in these decisions is usually limited to public hearings regarding existing proposals, residents largely have no meaningful way to

144. *Id.* at 718–19.

145. *Id.* at 719.

146. *Id.* This project is a partnership between community residents, government entities, CBOs, and larger nonprofits serving the city.

147. The City of Providence's Climate Justice Plan, *supra* note 101, at 27; Yeung et al., *supra* note 97, at 9–10.

148. Arnold, *supra* note 89, at 727.

149. *See* The City of Providence's Climate Justice Plan, *supra* note 101, at 27, 34, 41.

150. *See* Yeung et al., *supra* note 97, at 9–10.

151. Votaw, *supra* note 67, at 503.

propose development goals for their own communities.[152] Where zoning authorities have no obligation to prioritize climate or equity outcomes, discretionary zoning decisions can play an active role in facilitating gentrification, decreasing opportunities for effective climate adaptation, and undermining resilience.[153]

Providence's Climate Justice Plan aimed to get around this by incorporating co-governance models to explore local zoning changes. Here, frontline communities themselves would set objectives for development, and zoning mechanisms would be updated to meet these objectives.[154] By updating the zoning ordinance to prohibit new fossil fuel infrastructure and using community-led processes to discuss options like updating performance standards, local governments can prevent burdens of additional pollution and address the cumulative health impacts of industrial land uses adjacent to homes, schools, and parks.[155]

Providence also aimed to improve quality of life through community benefits agreements. These agreements would require the local government to develop a local model and assessment plan alongside frontline communities. The agreements would then be required for large new developments or redevelopments—particularly those that received public dollars or subsidies for project implementation.[156] Community benefits agreements ensure that a developer assesses project impacts to the surrounding neighborhood, including those related to housing affordability and displacement, transportation and traffic, local jobs, carbon emissions and air pollution, and health.[157] Under these agreements, developers and project proponents must work together with several CBOs to minimize these impacts, as the agreements constitute legally binding promises, enforceable by the community.[158] Shared accountability among local government, developers, and CBOs can enable the building of trust through relationships that bridge and link across impacted neighborhoods and hierarchies.

1. Community land trusts

Community land trusts are an approach that may allow local governments to directly benefit communities through land use policies. Land trusts are nonprofit organizations incorporated for the purpose of acquiring and holding land in trust for public benefit.[159] As opposed to conservation land trusts, community land trusts tend to work more in urban areas because they focus on stewarding land for community assets such as new or existing affordable housing, economic development activities, parks, and community gardens.[160] Community land trusts acquire land through

152. *Id.* at 500, n.18.
153. *Id.* at 500, 503, 508.
154. The City of Providence's Climate Justice Plan, *supra* note 101, at 54.
155. *Id.* at 54, 57.
156. *Id.* at 42.
157. *Id.*
158. *Id.* at 43.
159. Jessica Grannis, *Community-Driven Climate Solutions: How Public-Private Partnerships with Land Trusts Can Advance Climate Action*, 44 Wm. & Mary Env't L. & Pol'y Rev. 701, 703, 709 (2020).
160. *Id.* at 711.

purchase or donation. Because they can retain title to the underlying land and the public subsidy used to build housing, these trusts can permanently separate the land from the value of improvements, thus, removing the land from the speculative market.[161] Accordingly, this preserves permanent affordability for residents and future generations alike.[162]

As a co-governance model that builds political will and resident support by including a diverse array of stakeholders, community land trusts are uniquely suited to supporting climate resilience.[163] Their emphasis on community empowerment around land stewardship helps directly address the pervasive socioeconomic and environmental stressors which undermine resilience in the face of climate change.[164] These kinds of institutional land use tools can bridge the disconnects between environmental law, green infrastructure, and affordable housing, to proactively prevent displacement.[165]

One city partnership created the Dudley Neighbors, Inc. community land trust in the 1980s, with the goal of combating blight and facilitating neighborhood redevelopment.[166] The City of Boston granted the trust the power of eminent domain so that the trust could acquire vacant and blighted parcels for development as affordable housing and other community uses, including urban farms and community centers.[167] Furthermore, the Dudley Neighbors trust initially received significant financial resources from the City and the State of Massachusetts to support housing and community amenities.[168] The trust now receives a third of its current annual budget from government sources.[169]

Dudley Neighbors, Inc., prevented displacement by preserving low-cost housing options amid rising gentrification, and by enhancing community development control through a representatively diverse governing board. The trust's role in targeting housing and food security simultaneously enabled it to reduce urban heat islands, manage stormwater, and increase neighborhood social bonds.[170] It now serves as a model for many other cities as it stewards 225 units of affordable housing, an urban farm, a greenhouse, a charter school, parks, and a town common.[171] Beyond this, the Boston Mayor's office also provided support for the Dudley Street Neighborhood Initiative to launch a Greater Boston Community Land Trust Network that brings together advocates, researchers, and nonprofits to share best practices,

161. *Id.*
162. *Id.*
163. *Id.* at 709, 712–14.
164. *Id.* at 709.
165. Arnold, *supra* note 89, at 693–94, 727–28.
166. Grannis, *supra* note 159, at 718–19.
167. *Id.* at 735–36.
168. *Id.* at 739.
169. *Id.*
170. *Id.* at 719–20.
171. *Id.*

raise awareness, and provide technical support for the incorporation of climate resilience into land trust work.[172]

Despite these benefits, unequivocally transferring complete land use decision-making power over to community groups presents its own risks. CBOs and nonprofits may lack the necessary experience to efficiently manage or allocate provided funding, resulting in waste of resources throughout project timelines. Without sufficient knowledge of planning principles and best practices, they may also produce outcomes that end up providing little public benefit or that conflict with the objectives of surrounding neighborhoods. It is likewise important to note that CBOs and collaborative governance are not infallible. Like any other group or individual with power, this is a system that could be taken advantage of for the benefit of one or a few individuals that purport to represent the whole. Guardrails are therefore necessary to ensure that those who make formal decisions within these groups not only hold the government accountable, but also remain accountable themselves.

Aside from granting eminent domain, local governments can also adopt specific land disposition policies. These policies could include offering surplus, under-utilized, or tax foreclosed lands at below-market rates to trusts that deliver permanent community-led benefits.[173] Government institutions could also use criteria that prioritizes beneficial community-ownership models in bidding processes for the redevelopment of publicly-owned land.[174] Furthermore, localities can provide donations; interest-free deferred loan programs to help trusts compete with developers; tax incentives for public-private partnerships with trusts; or greater flexibility to transfer ownership of surplus, vacant, or abandoned private properties.[175] The Providence Climate Justice Plan similarly proposed providing community land trusts with special zoning designations to facilitate these processes.[176] Overall, local governments have a variety of land use policy options at their fingertips that they can customize to their particular region or city's circumstances.

V. Analysis and recommendations

In light of the many strategies available to bolster social cohesion, municipal governments across the country can learn much from the collaborative governance and land use examples described above. And these institutions can have faith in the long-term applicability of such approaches. Since 2019, the role of Providence's Climate Justice Plan has only been strengthened by the local government. In 2021, the City went a step further and institutionalized the plan into the Providence City Code of Ordinances. Here, the plan's goals became explicit city commitments.[177]

172. *Id.* at 743–44.

173. *Id.* at 735–36.

174. *Id.*

175. *Id.* at 736–37, 739, 741–43.

176. The City of Providence's Climate Justice Plan, *supra* note 101, at 41.

177. Providence, R.I., Code of Ordinances § 2–143(a) (2023). These goals included preparing the city for climate change impacts, providing healthy air and community spaces focused in frontline neighborhoods, and ensuring access to housing with affordable, efficient, and clean

This also committed the City to duties including partnering and collaborating with environmental justice communities, reviewing the City's capital improvement plan to ensure alignment of other investments with the Climate Justice Plan, and comprehensively updating the plan every five years based on up-to-date science and community input.[178]

The ordinance also bolstered the Climate Justice Plan by creating a Sustainability Commission. The Commission's 11 members must be appointed by the Racial and Environmental Justice Committee or other local environmental justice organizations, youth-led organizations, and the Environmental Council of Rhode Island. These members are responsible for reviewing reports from the Office of Sustainability, highlighting community priorities, and advising on the City's climate agenda.[179] In doing so, the ordinance ensured that appointed members are required to have strong community ties and expertise related to community needs, sustainability, and climate policies.[180]

Principles from Providence and the other mechanisms highlighted in the previous section demonstrate that addressing equitable divisions of power is crucial not only between communities and larger political institutions, but also between affected communities themselves.[181] By targeting inequality at its core, local governments have the potential to increase bridging social connections and trust—ultimately leading to a less frayed, more robust civic fabric for all.[182]

A. Application to Southern California

California has been widely regarded as a leading force in both climate mitigation and adaptation. Within the state, the Los Angeles–Long Beach combined statistical area has the second largest population in the country.[183] Accordingly, the Southern California Association of Governments (SCAG)—comprised of six different counties and 19 million residents—is the largest regional planning organization in California.[184] Some of the most prominent climate impacts affecting this population include extreme heat, wildfires, poor air quality, coastal flooding due to sea level rise, drought, inland flooding, and severe storms and wind.[185]

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energy. *Id.*

178. *Id.* at § 2–143(b).

179. *Id.* at § 2–144.

180. *Id.*

181. Sullivan, *supra* note 96, at 617.

182. Strand, *supra* note 88, at 174.

183. United States Census Bureau, Annual Estimates of the Resident Population for Combined Statistical Areas in the United States and Puerto Rico: April 1, 2020 to July 1, 2023 (2023), https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-metro-and-micro-statistical-areas.html [https://perma.cc/2T7A-PNUC].

184. *See* SCAG, *About Us: Our Members*, https://scag.ca.gov/about-us-our-members (last visited Dec. 2, 2024). Members of SCAG include Imperial County, Los Angeles County, Orange County, Riverside County, San Bernardino County, and Ventura County. While San Diego County has its own separate metropolitan planning organization (SANDAG), this discussion may also broadly apply to communities in this county.

185. SCAG, Southern California Climate Adaptation Planning Guide 16–25 (Oct. 2020),

This section will apply the previously discussed mechanisms to a Southern California context, highlighting opportunities for local governments in this region. The use of explicit collaborative governance arrangements, state programs with CBOs to access funding and create resilience hubs, community land trusts, and land use tools like general plans have the potential to ensure that communities build and safeguard permanent social cohesion.

First, these governments can incorporate co-governance into their adaptation and resilience plans by utilizing more formal power-sharing arrangements and partnerships with CBOs and residents. To its credit, SCAG's Southern California Adaptation Planning Guide does mention collaborative partnerships and flexible governance approaches as a guiding principle in alignment with the state's Integrated Climate Adaptation and Resiliency Program.[186] Throughout the guide, SCAG also discusses the importance of incorporating an Engagement and Outreach Plan at every step of the planning process; using the essential principles of successful engagement in its Regional Resilience Toolkit; dedicating resources to engaging frontline communities; and contemplating social, institutional, and economic contributing causes of climate vulnerability.[187]

The vast majority of these engagement strategies, however, are characterized as participatory. The guide places repetitive emphasis on processes that enable communication to the public or that maximize opportunities for community input. This reflects the types of top-down, government-driven consultation approaches that forego supportive strategies to build upon bottom-up organizing. While community members may have some opportunity to share local knowledge and influence the direction of policies, full and final decision-making power ultimately rests with the governments.

The Los Angeles Countywide Sustainability Plan provides an example of how SCAG and other formal entities in Southern California can move beyond these forms of community input. Strategy 11A of the plan explicitly targets the creation of an inclusive governance structure to involve residents in decision-making at every level.[188] Similarly, Strategy 11B promotes environmental stewardship across different age, income, ethnicity, and language groups.[189]

Each of these strategies consists of concrete actions intended to ensure their implementation. This includes County collaboration to create community-led programming for preparedness planning and other environmental outreach, explicit partnerships with non-governmental organizations to develop culturally appropriate

https://scag.ca.gov/sites/main/files/file-attachments/socaladaptationplanningguide_oct2020_0.pdf [https://perma.cc/B8XY-GKHK]; Los Angeles County, LA County Climate Vulnerability Assessment 6 (Oct. 2021), https://ceo.lacounty.gov/wp-content/uploads/2021/10/LA-County-Climate-Vulnerability-Assessment-1.pdf [https://perma.cc/55VJ-SSTP].

186. SCAG, *supra* note 185, at 6–8.

187. *Id.* at 37, 40, 116.

188. Los Angeles County, OurCounty: Los Angeles Countywide Sustainability Plan 158–162 (Aug. 2019), https://ourcountyla.lacounty.gov/wp-content/uploads/2019/07/OurCounty-Final-Plan.pdf [https://perma.cc/44UZ-UE9Z].

189. *Id.* at 162–164.

education and workforce training initiatives, and coordination with local tribes to integrate traditional environmental knowledge and practices.[190] The plan further builds stakeholder capacity by setting aside funding for childcare, translation services, transportation, cultural engagement activities, and reimbursement costs for CBOs and local tribes.[191]

Although Los Angeles County is extremely large and covers a broad portion of Southern California, it remains true that agency territories typically limit cross-county collaboration.[192] Given that more regional approaches encourage collaboration and improved outcomes, entities like SCAG can take note of these policies and more concretely implement forms of co-governance broadly across their jurisdictions.

This could take the form of calling on municipalities to create resident councils. It could also include providing residents with representation on the bodies of legal entities with formal decision-making power at local and neighborhood levels. Or—given the high demographic of undocumented immigrants in this region[193]—SCAG could highlight the benefits of community programs which provide a proof of identity for everyone in the community, regardless of immigration status. These municipal I.D. cards would effectively serve as necessary documentation for accessing essential services,[194] thereby fostering linking social cohesion and reducing the danger of displacement. Through co-governance, SCAG can provide important contributions to both structural as well as sociocultural cohesion by cementing shared values of community organizing, collaboration, and motivation for residents to collectively act for the common good.

Second, the institutionalization of CBOs is particularly promising for Southern California because streamlined state programs already exist to rely on. State Assembly Bill 2722 and Senate Bill 155 created two new grant systems under the California Strategic Growth Council in 2016 and 2021, respectively: the Transformative Climate Communities (TCC) and the Community Resilience Centers (CRC) Programs. The TCC funds community-led development and infrastructure projects which achieve major environmental, health, and economic benefits in the state's "most disadvantaged communities."[195] In doing so, the TCC ensures collaborative decision-making

190. *Id.*

191. *Id.* at 158.

192. Cindy Montañez, *Montañez: The Future of Urban Planning and Climate Resilience in Southern California*, Voice of OC (Dec. 29, 2022), https://voiceofoc.org/2022/12/montanez-the-future-of-urban-planning-and-climate-resilience-in-southern-california/ [https://perma.cc/UYM9-4GFQ].

193. Approximately 1.8 million immigrants in California were undocumented in 2022, accounting for 17 percent of the state's immigrant population. Marisol Cuellar Mejia et al., Immigrants in California Fact Sheet 1 (Jan. 2025), https://www.ppic.org/wp-content/uploads/jtf-immigrants-in-california.pdf [https://perma.cc/U7NR-CFAH].

194. Sifuentes et al., *supra* note 24, at 34.

195. California Strategic Growth Council, *Transformative Climate Communities* (Apr. 2023), https://sgc.ca.gov/programs/tcc/docs/20230424-TCC-Fact_Sheet-en.pdf [https://perma.cc/FRP6-YG4Y].

by requiring project partners to create memorandums of understanding that codify how they intend to work together.[196]

The CRC likewise funds the development of neighborhood-level facilities to provide shelter and resources during emergencies, and to provide year-round services that strengthen community connections and disaster resilience.[197] CRCs have already been created in areas throughout the state: Tuolumne County's two centers opened in 2022 and have been put to use as warming shelters during severe winter weather, and have provided dedicated spaces for community projects and disaster response.[198] In the Boyle Heights neighborhood of east Los Angeles, the Boyle Heights Arts Conservatory—normally dedicated to youth career training—has become a reprieve to regularly shield residents from extreme heat and wildfire smoke.[199]

However, because both programs are highly competitive and reimbursement-based,[200] CBOs may struggle to obtain sufficient capacity or start-up capital to apply and implement projects in the first place. Localities can step in by directly partnering with CBOs to apply for grants under these programs, as well as by providing technical assistance and training to navigate these processes. Local governments can also use these programs as models to directly set up their own application processes or provide tax incentives for private partners. This would ensure that CBOs receive appropriate training and resources to implement resiliency projects, even if they do not obtain state-funded grants.

Third, cities and counties can foster the implementation of projects that provide both housing affordability and climate resiliency through the expansion of community land trusts. This is already occurring in the City of Irvine in Orange County, where the City provided an initial $250,000 grant to start up the Irvine Community Land Trust. It also provided technical assistance and staff to initiate the trust's first projects, ensured coordination between the trust and the City's housing programs, and provided for the direct transfer of affordable housing units required through the City's Inclusionary Zoning Program.[201] Not only did the trust develop sustainable, affordable housing, but it also provided a half-acre of open space, a 5,000 square foot community space, and multiple community gardens.[202] One of the trust's housing

196. Yeung et al., *supra* note 97, at 15.

197. California Strategic Growth Council, *Community Resilience Centers* (Jul. 2022), https://sgc.ca.gov/programs/community-resilience-centers/docs/20220721-CRC-Fact-Sheet.pdf [https://perma.cc/QHK8-N3NB].

198. *California's New Community Resilience Centers Already Proving Worth*, Civix (March 15, 2023), https://gocivix.com/news/californias-new-community-resilience-centers-already-proving-worth/ [https://perma.cc/39TK-E53R].

199. Gabriela Aoun, *'A living, breathing building': the rise of resilience centers amid extreme heat in the US*, Guardian (September 23, 2022), https://amp.theguardian.com/us-news/2022/sep/23/california-extreme-heat-resilience-centers [https://perma.cc/ZH8S-9YGX].

200. CBOs under the CRC can, however, receive advance payment of up to 25 percent of their total award. California Strategic Growth Council, *CRC Program Frequently Asked Questions* (Jul. 2023), https://sgc.ca.gov/programs/community-resilience-centers/resources/faq.html [https://perma.cc/65LY-2Y9D].

201. Grannis, *supra* note 159, at 742–43.

202. *Id.* at 721.

projects explicitly reserved ten percent of its homes for people with a history of homelessness.[203] Other governmental entities in the rest of Southern California have the potential to use these examples as a starting point for their own zoning mechanisms that strengthen partnerships with community land trusts in their jurisdictions.

Finally, both cities and counties can institute social cohesion frameworks directly into their respective general plans. A general plan is a local government's blueprint for meeting the entity's long-term development visions for the future.[204] Senate Bill 379, passed in 2015, requires all municipalities to explicitly incorporate climate adaptation and resilience planning (including minimum requirements for implementation measures) into the Safety Element of their general plan.[205] Senate Bill 1035, passed three years later, requires regular updates of these components at least every eight years.[206] Municipalities can and should go above and beyond the minimum planning requirements of this statute to ensure that they include forms of social cohesion which contribute to climate resilience.

It may, of course, be difficult to incentivize government entities to expend additional resources where they are not mandated. Even the Los Angeles Countywide Sustainability Plan is merely aspirational rather than binding. Despite its policies, it is unable to supersede formally adopted land use plans like the general plan.[207] The County, however, is solving this issue through the Board of Supervisors' adoption of a policy creating a Climate Action Plan. The new Climate Action Plan will align with the Sustainability Plan and act as an enforceable document that is formally embedded into the County general plan.[208] This movement beyond the minimum requirements set forth by Senate Bill 379 can be at least partially attributed to the County's Chief Sustainability Office, which provides comprehensive and coordinated policy guidance to the Board of Supervisors and other departments.[209] Other city, county, or regional governments may be able to accomplish the same thing by creating similar policy workshops that push these governments to act in beneficial ways beyond what they are obligated to do.

By working closely with communities to tailor and design any of the above projects, formal institutions in Southern California can cultivate systems of community-led stewardship. Government resources and support help ensure the implementation of climate features such as green infrastructure, low-cost resilient heating and cooling systems, air filtration systems that protect community health against poor air quality and wildfire smoke, and microgrids that guard such systems against electricity outages during peak use periods or emergencies. These systems,

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203. *Id.*

204. *General Plan Information*, California Governor's Office of Land Use and Climate Innovation (2024), https://opr.ca.gov/planning/general-plan/ [https://perma.cc/WPT2-FQM7].

205. SCAG, *supra* note 185, at 11.

206. *Id.*

207. Los Angeles County, *supra* note 188, at 14.

208. *Id.*

209. Los Angeles County, *Chief Sustainability Office*, https://cso.lacounty.gov/ [https://perma.cc/645K-8U5Z] (last visited Dec. 3, 2024).

in tandem with relevant cultural programming and activities, serve to improve quality of life, strengthen social relations, guarantee accessible resources, and cement community identification across groups.

VI. Conclusion

This paper presents an overview of the relations between social cohesion, climate resilience, and the impacts of climate change. Social cohesion constitutes both structural and sociocultural components, and can be viewed through the lens of bonding, bridging, and linking. It can increase reactive, responsive, and proactive climate resilience, but can also be greatly disrupted by climate threats that will only continue to increase in frequency and severity.

Countless residents of Los Angeles are still reeling from the Eaton and Palisades Fires. In Southern California and beyond, communities continue to be displaced by climate impacts on a daily basis. Action is needed, now more than ever, to ensure that the feedback loop between social cohesion and climate resilience only operates to strengthen our communities—not harm them. Collaborative governance systems and inclusive land use policies are mechanisms that can help achieve this goal. These approaches, however, are held back by the overwhelming prominence of traditional, hierarchical institutions. If we wish to make real progress, local governments must first recognize that prioritizing social cohesion is crucial to developing a multifaceted response to climate change.

This may be easier said than done, but it *can* be done. We must simply be willing to try.