Community and Communication for Cape Ann Climate Resilience

Jason Beckfield, Amelia Linton, and Samantha Wyman

Introduction

Like many coastal communities around the world, people who live on Cape Ann are grappling with their unique vulnerabilities to climate change. Sea level rise, coastal erosion, saltwater intrusion, increased storm intensity, and higher high tides that cause flooding even on sunny days are just some of the climate impacts that coastal communities can expect.[1] In this report on public engagement and civic communication, we use our newcomers' understanding of Cape Ann, the background materials made available online by the Office for Urbanization at the Harvard Graduate School of Design, and research on how governments relate to their publics to offer social pathways to increased climate resilience on Cape Ann. We aim to enhance the capacity of the municipal governments to communicate with community organizations and engage the public in decision-making processes related to the increasing frequency of tropical storms and hurricanes. We also hope to support municipalities in framing and using the unique core capacities and social resources for resilience that exist on Cape Ann. These capacities are a strength for current and future resilience planning, and create opportunities for business leaders, community organizations, and media outlets to enhance their local capacity to anticipate, prepare for, manage, and recover from extreme weather events.

A Compound Vulnerability Report from the Graduate School of Design at Harvard University has used a scenario planning approach to predict future impacts from an imagined Great Storm of 2038: a scientifically plausible Category 3 hurricane that hits Cape Ann.[2] The scenario planning reveals key vulnerabilities in the infrastructure of Cape Ann. Recent storm and flooding events have already brought attention to the risks facing low lying infrastructure.[3] The community has already started to see stormwater pool at the door steps of homes, and flood public infrastructure and schools.[4] As sea level and temperature continue to rise it is predicted that a Great Storm of 2038 could lead to fallen trees and telephone poles, fires, ruptured gas pipes, broken bridges and flooded roads. The impact of this disaster would not only have consequences for the built environment, but would also lead to the displacement of people. Residents living in the floodzone would be particularly vulnerable, but road and waterway networks could easily transmit vulnerabilities to many more people who could experience contaminated water, food and gas shortages and overburdened hospitals.[5] As with other disasters, the social impacts would be unevenly distributed, and would thus be "caused" as much by social

[1] US EPA, "Climate Change Impacts on Coasts."
[2] Office For Urbanization, "Regenerative Landscapes Report."
[3] Office For Urbanization; Good Morning Gloucester, "Coastal Flooding."
[4] The Manchester Cricket, "Historic Flooding"; Office For Urbanization, "Regenerative Landscapes Report."
[5] Office For Urbanization, "Regenerative Landscapes Report."

forces like poverty and social exclusion as they would be by the physical forces carried by water and wind.

Harm from such disasters can be prevented or at least reduced through adaptation and resilience. Moving key infrastructure to higher ground, giving special attention to homes in the floodplain and prioritizing more affordable housing, are all ways of reducing harm.[6] But adaptation is also social: some communities are more resilient to disasters than others, some communities are more able to govern themselves than others, and some communities establish more effective decision-making processes than others. In planning for disasters like the Great Storm of 2038, Cape Anners will need to make choices that impact everyone. These choices will be made through social processes. Building social processes for climate resilience is possible, and in this report we draw on several fields of research to reflect on Cape Ann's strengths and challenges, and to offer social pathways to climate resilience. We believe that research from the fields of environmental justice, disaster studies, and political sociology can be useful to Cape Anners, as they come together to consider the future of Cape Ann in a changing climate.

While a Great Storm of 2038 is a weather storm, we are writing this report amidst the Great Storm of 2025, a political storm that is undermining federal resources for climate monitoring and climate planning. Clouds of uncertainty cover the future funding landscape as well as the recognition of climate change and environmental justice at the federal level. Executive orders from the federal government no longer recognize climate change as a real threat nor environmental justice as a pathway forward.[7] These executive orders have impacted federal agencies such as the National Oceanic and Atmospheric Administration (NOAA), Department of Energy, Environmental Protection Agency, and Department of Transportation; agencies that had funded climate resilience and environmental justice initiatives. The loss of this funding is already being felt by local communities.[8] Financial resources, like heat and water, are real, and affect real people in the real world regardless of whether one wears a red hat or a blue one.

Frameworks

Our goal in writing this report is to use our newcomers' understanding of Cape Ann, the online background materials produced by the Office for Urbanization at the Harvard Graduate School of Design, and research on how governments relate to their publics to offer social pathways to increased climate resilience on Cape Ann. Our report rests on three assumptions. First, we assume that collective efficacy - organized social solidarity and the cultural sense of the ability and responsibility to solve shared problems - enhances resilience to climate-related risks like the Great Storm of 2038.[9] Second, we assume that the quality of relationships between governments and their publics matter for climate resilience, because productive relationships make for better planning and recovery, and because public officials will need to communicate risks and

[6] Office For Urbanization.
[7] The White House, "Protecting American Energy From State Overreach."
[8] Lavelle and Aldhous, "EPA Funding Cuts Target Disadvantaged Communities, Analysis Shows."
[9] Sampson, "What 'Community' Supplies."

responses. Third, we assume that government communication before, during, and after disasters works better with collective efficacy, because of social trust and generalized reciprocity, and the better information flow through social networks. To make specific, state-of-the-art, actionable suggestions, we draw on three fields of research: environmental justice, the sociology of disasters, and pragmatist political sociology.

Environmental Justice

Cape Ann is home to 8 census tracts designated as environmental justice (EJ) communities. Seven tracts gained this designation through income level, and one through meeting minority population level criteria.[10] In Massachusetts a census tract is considered to be an environmental justice community if one or more of the following conditions are met: 1) the annual household median income is 65% of less of the statewide annual median household income, 2) minorities make up 40% of more of the population, 3) 25% or more of households identify as speaking English less than "very well", 4) minorities make up 25% of more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income.[11]An EJ designation is a community-level designation that describes a community of people, and does not mean that each and every individual within a community shares a given characteristic. Many people in EJ communities are white, for instance, and EJ communities have many middle-and professional-class people who identify as belonging to ethnic minorities. The point of the EJ designation is that EJ communities have specific collective vulnerabilities (while also having specific collective resources such as mutual-aid norms that often go unrecognized).

Environmental justice is the recognition that all people regardless of their income-level, national origin or race should have the same environmental protections, benefits and ability to shape policies in their community.[12] Low-income and language isolated residents, as well as communities of color face unique barriers when trying to influence environmental decision making within their own communities.[13] This exclusion from decision making on local development, regulations, housing and the like, means that communities cannot protect important aspects of their own lives including physical and mental health, gentrification patterns, business and industry changes.[14] Lack of autonomy in this realm has led marginalized communities to experience differential exposure to stress, toxins, pollutants and heat due to decisions made about their housing, employment opportunities, and neighborhood development.[15] This leads to differential health outcomes between neighbors and neighborhoods.[16]

---

[10] "Environmental Justice Populations in Massachusetts."
[11] Executive Office of Energy and Environmental Affairs and Office of Environmental Justice and Equity, "Environmental Justice Populations in Massachusetts."
[12] Skelton and Miller, "The Environmental Justice Movement."
[13] Mohai, Pellow, and Roberts, "Environmental Justice."
[14] Mohai, Pellow, and Roberts.
[15] Fang et al., "Centering Equity in Climate Resilience Planning and Action."
[16] Walker, "Urban Heat Islands and a Climate of Inequities."

Environmental inequities continue to exist because marginalized people and places are treated as disposable, creating "sacrifice zones". Harmful political and corporate practices neglect community voices, allowing for higher concentration of pollutants and degradation to settle in marginalized communities. This forces entire neighborhoods to bear disproportionate health and economic sacrifice that more affluent neighborhoods can avoid.[17] The presence of sacrifice zones reveals the true cost of industrial and institutional processes, and sheds light on the need for just and inclusive decision making processes. These dynamics exist on the global scale, creating deep parallels between environmental justice and climate justice.[18]

Grassroot groups developed environmental justice as a framework and continually work to integrate it into mainstream environmentalism.[19] Consistent with the movement's values of equity and empowerment, many organizing groups strive for an egalitarian operational structure, believing that "power rests in all of us and when we operate as a collective, that's when we are most powerful and we move forward as a unit, as a body and not necessarily with a hierarchy."[20] Many organizations that take this approach view their work and community engagement as an iterative, non-linear process that requires community input and adjustment at every step of the process. The focus is on social relationships and social processes, not outcomes; processes, not events. This means shifting away from harmful aspects of the dominant political process and culture that uphold "urgency, paternalism, perfectionism, individualism, defensiveness, fear of open conflict, and worship of the written word,"[21] and instead centering cultural practices that foster belonging, equity and justice.[22]

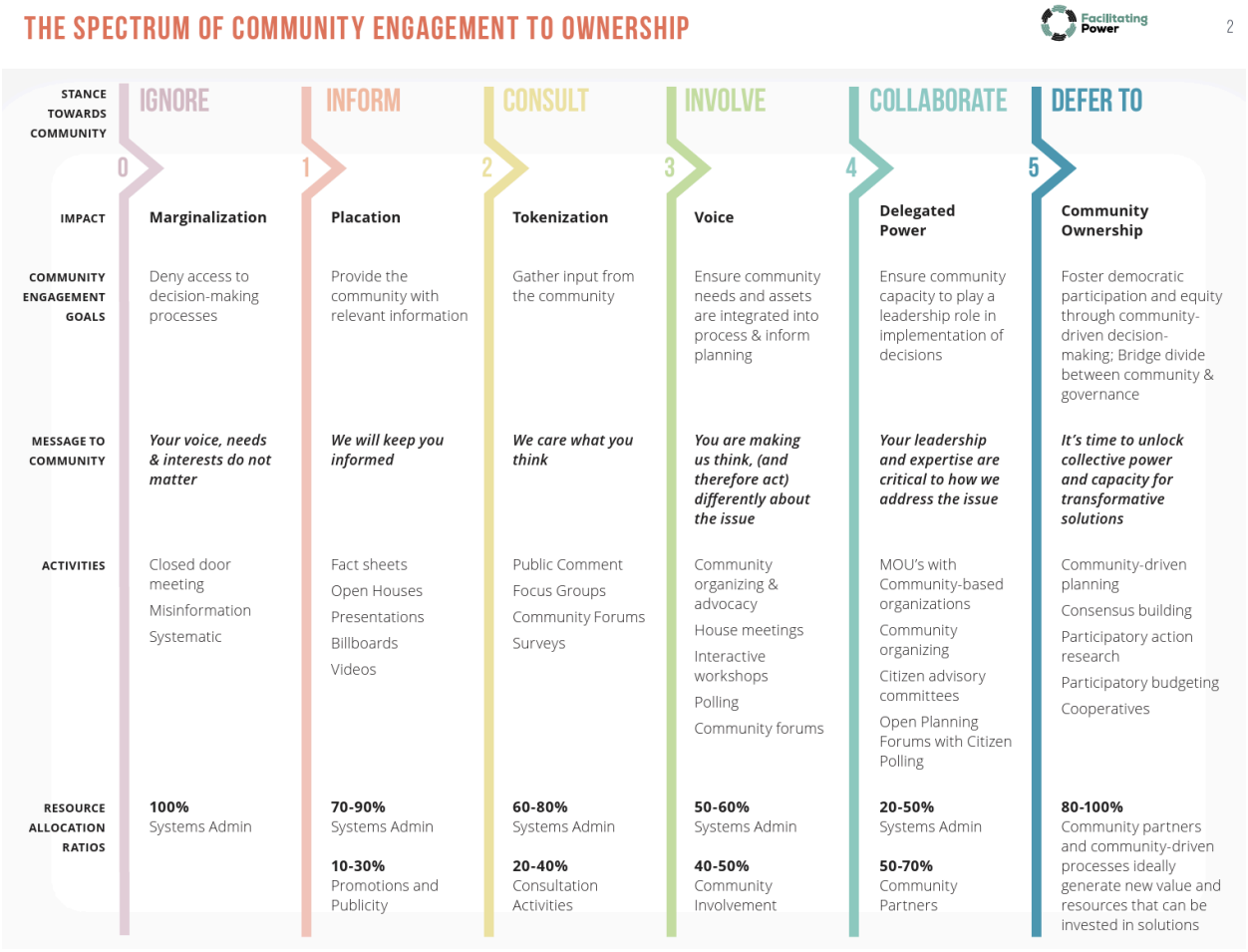
For organizations engaged in this work, inclusion and diversity are an important marker of alignment with EJ principles, but are not a definite sign of justice.[23] Community members should be deferred to and seen as true collaborators at every stage of action and consultative decision making.[24] Special attention should be paid to community members who hold intersectional identities, since their lived experience can highlight key nuances in how to achieve EJ goals. Striving to create a movement where all people feel a fuller and fuller sense of belonging will aid the movement to fulfill its purpose.[25]

EJ organizations pioneer just social processes of decision-making. If community engagement in decision-making can be thought of as a spectrum of power-sharing, where, at one end, powerful actors simply inform the public about decisions, EJ organizations tend to aim for

---

[17] Juskus, "Sacrifice Zones: A Genealogy and Analysis of an Environmental Justice Concept."
[18] Schlosberg and Collins, "From Environmental to Climate Justice."
[19] Mohai, Pellow, and Roberts, "Environmental Justice."
[20] Schweizer and Bullard, "Environmental Justice: An Interview with Robert Bullard."
[21] Fang et al., "Centering Equity in Climate Resilience Planning and Action."
[22] Fang et al.
[23] Lorenzen and Drew, "'We Need Communities of Color.'"
[24] Rosa González, "The Spectrum of Community Engagement to Ownership: Toolset for CCS Community Climate Shift."
[25] Active Solidarity: Intersectional Solidarity in Action (Rachel Einwohner), Pinero Shields Pineros-Shields, "'Midwife for Power': Towards a Mujerista / Womanist Model of Community Organizing - Brandeis University"; Eienwohner et al., "(PDF) Active Solidarity."

the other end of the spectrum, where power is ceded to communities and communities define their own problems and develop their own solutions. The figure below illustrates this spectrum:



Source: Gonzalez, Rosa. 2019. "The Spectrum of Community Engagement to Ownership." Facilitating Power.

This guide can be used by local government officials and advocacy groups. Moving along this spectrum will take effort and intentionality. And even if the intent is not to shift processes from the left to the right, recognizing where a given episode of public engagement is on the spectrum is helpful because then the person in power can know what the people out of power might think about the roles they are being cast into. Regarding engagement by local government, some community members we spoke with felt like they were at times involved (level 3) in projects. However, more consistently, people felt marginalization, placation and tokenization throughout the planning process carried out by the local government. This suggests that local officials need to find new methods of engaging with the community in order to reach higher and higher levels of community engagement and ownership.

The EJ field, as a community of practice, organizing, and science, has developed different dimensions of justice that are helpful in thinking about just social processes for planning for climate resilience. One dimension is recognitional justice. Recognitional justice concerns itself

with the recognition (or lack there of) of identities and cultural practices. Some cultural practices and identities are more understood, accepted, and legitimized through formal institutions than others. This discrepancy is why recognitional justice is needed. There are two other forms of justice: distributional and procedural. Distributional justice concerns itself with which stakeholders get to enjoy benefits and bear costs of decisions. Distributional justice is about outcomes: who wins, who loses. Procedural justice concerns itself with how decisions are made, who gets to make decisions and the terms of participating in decision making.[26] Procedural justice is about process. Below we elaborate on recognitional justice, since this is a less familiar concept and a newer area of research.

Cultural Recognition

Sociologist Michele Lamont outlines a framework for studying inequality in terms of recognition gaps. Recognition gaps are defined as "disparities in worth and cultural membership between groups in a society[27]." In today's politically polarized society many groups have made claims for recognition in an attempt to secure cultural membership and social inclusion. Examples from the political left include Black Lives Matter and the LGBTQ+ movement and from the right include the Proud Boys and Blue Lives Matter[28]. Although material inequalities still matter for the study of inequality, so do gaps in recognition. Recognition is not simply about people feeling good about themselves because others acknowledge their value.

Recognition has an intrinsic value because of the direct impact of human dignity and social justice on well-being. Stigmatization and discrimination, the antithesis of recognition, are associated with physical and subjective well-being in several different forms. For example, research has demonstrated that racism is a "psychosocial stressor that affects health negatively and contributes significantly to racial disparities in health in the United States." Stigma exercises an independent effect on poverty because it directly limits a group's access to resources such as social capital through isolation. Over the past several decades white working-class individuals have begun to isolate themselves due to feelings of worthlessness. Their isolation and financial instability caused by their downward mobility has contributed to the opioid epidemic and the decline in life expectancy among non-college-educated whites in the United States[29]. The stigmatization of certain groups informs the formation of social policy and support for social welfare programs. If the public has deemed certain impoverished groups as unworthy, support for welfare benefits declines[30].

Recognition gaps can also influence the outcome of political elections. Felt stigma can be a powerful political resource for candidates to use. For instance, campaigns can validate voters'

[26] Martin et al., "Justice and Conservation."
[27] Lamont, "Addressing Recognition Gaps."
[28] Franco Angeli, "A New Political Generation."
[29] Case and Deaton, "Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century."
[30] Lamont, *Money, Morals, and Manners: The Culture of the French and the American Upper-Middle Class*.

worth as workers by blaming others for their downward mobility (feared or actual)[31]. Lamont identifies three important steps for achieving group destigmatization: "(1) improve beliefs and attitudes through institutions and informal interactions; (2) provide positive constructions of groups and behaviors among stigmatizers; and (3) provide support for laws and policies that incorporate groups." Although this process is difficult, society's evolving perception of people living with HIV/AIDS demonstrates that it is not impossible. With the support of dedicated key actors such as social movement leaders, legal experts, and cultural intermediaries, a group can be destigmatized.

Sociology of Disasters

Natural disasters are socially constructed. Organizational cultures and practices shape what events our society deems "disastrous." For example, the news tends to hyperfixate on some events while neglecting coverage of other types of events[32]. Therefore, the ignorance of hazards is also socially produced. Institutions use denial, dismissal, diversion, and displacement to keep "uncomfortable knowledge" from the public[33]. Sociology provides several useful frameworks for understanding disasters and resiliency. Foremost, there is the "Safe development paradox"[34]. This theory investigates the tension that exists between the government ostensibly offering protections from hazards while investments intensify development in hazardous areas.

There can be a tension between the interests of developers and the public interest. Public officials often have to decide whether to prioritize money or safety. This is seen in poor and wealthy areas, for example the recent development of mansions on coast in areas of high erosion and risk of storm damage. The sociological literature also emphasizes the difference between exposure and vulnerability. Everyone who is exposed to a disaster is not equally vulnerable. There are three different types of vulnerability: built, place based, and social. Built vulnerability refers to how the built infrastructure impacts vulnerability. For example, advanced societies are so dependent on electricity, power outages make them very vulnerable. Place based vulnerability is in regard to the exposure of a location to disasters. Social vulnerability is "the social origins and aspects of the differential potential of individuals and communities to experience short-term and long-term consequences as a result of a disaster." The key dimensions of social vulnerability are class, race, and gender. Other aspects include children, elderly, disabled, sexual minorities, and people with language barriers such as immigrants.

A sense of urgency is essential for mobilizing community action surrounding disaster preparedness. Statistically, mass panic is a very rare occurrence within society. Therefore, in regard to natural disasters experts do not need to be overly concerned about "making people panic." There are nine components of disaster resilience: capacity for improvisation in disasters, number and quality of physical and infrastructural resources, community capital, natural

[31] Hochschild, *Stolen Pride*.
[32] Tierney, *Disasters*.
[33] Rayner, "Uncomfortable Knowledge."
[34] Burby, "Hurricane Katrina and the Paradoxes of Government Disaster Policy."

resources, institutional capital, political capital, human capital, economic capital, social capital[35]. In order for a community to improve their resilience they must form a collaborative planning team, understand the community social and built environment and their linkages, determine community goals and objectives, develop a resilience plan and implementation strategy, prepare and review the plan obtaining approval from authorities, implement the plan, evaluate the plan's efficacy, and update the plan accordingly[36].

Pragmatist Political Sociology

Development, vulnerability, and urgency are all about the power of some people to get their way against the resistance of others. Political sociology reveals the social organization (who does what, when, and how) of power, where power is the ability to achieve one's goals against resistance. Thus, having power is relational (it's about interaction between two or more people or organizations) and relative (you're only more or less powerful than someone else).

Political sociology is useful for understanding who has power on Cape Ann to make what decisions, and how those decisions affect Cape Anners. It can also offer tools to people who would like to gain power. In this way, we are blending political sociology with newer research on pragmatist social mechanisms.[37]

Pragmatism is about solving problems. Following a pragmatist approach, social processes for building climate resilience are sequences or chains of actors (people and organizations), their habits (customary ways of acting that have allowed people and organizations to solve past problems), the new problems they encounter (such as the Great Storm on 2038), and the creative resolutions they reach (which then become new habits). This is a very different way of thinking about how people make choices from the dominant social-science model, rational choice theory.

Blending pragmatism with political sociology reveals how governments and their publics relate to build climate resilience. Who are the actors? Cape Ann has a complex social structure with many cleavages that are relevant to creating climate resilience through social processes:

a. Old-timers vs. newcomers
b. Locals vs. tourists
c. Fisherfolk vs. everyone else
d. Wealthy vs. everyone else
e. Second- and third-generation immigrants vs. first-generation immigrants
f. Government vs. the public

Currently, a highly salient cleavage is the left-right, Democrat-Republican, red-blue partisan cleavage that has a way of marking ambiguous policies, decisions, and risks with a red (R) or a blue (D). Ambiguity allows for political side-taking, as in "climate change" is a "Democrat

[35] Kendra, Clay, and Gill, "Resilience and Disasters."
[36] Community Resilience Group, "Community Resilience Planning Guide for Buildings and Infrastructure Systems."
[37] Gross, "A Pragmatist Theory of Social Mechanisms."

thing." This is why a recommendation we have for decision making for building resilience is to ratchet down the level of abstraction to specific terms like "heat" and "flooding."

Each set of actors follows their habits, for instance the habit of holding public meetings and organizing public comment in a certain way. Such habits might work fine for solving current problems, but might not work as well for solving future, climate-related ones, and so creative resolutions might be necessary. This can be where social life can serve as a resource, allowing people to trust each other enough to share genuine problems and try out different solutions. Social life can also then help to spread and institutionalize new practices.

Cape Ann's Resources and Challenges

The material above is all fairly abstract and scholarly. We offer these ways of thinking - these frameworks - because they can be applied to the case of building climate resilience through social processes relating government to the public. Below, we discuss what we see as some of the central resources and challenges facing Cape Ann as Cape Ann confronts climate change.

History

Many waves of migrants have established a home on Cape Ann. The natural beauty of the environment and the working waterfront were often the first things that attracted migrants to this area. This sense of home has nurtured many generations of Cape Anners whose heritage and history shapes the region as we know it.[38] The long and deep ties to the land and people here provides a wealth of community resources that Cape Anners can lean on to face current and future challenges. Through the conversations we had with community members it is clear that diverse groups of Cape Anners feel deeply connected to their home, and have a strong love for the landscape, ocean and authenticity of this place.[39] Such care, connection, and affection are important resources for climate resilience.

Many immigrant groups enjoyed a rich community life on Cape Ann. The community life was so strong that it allowed recent migrants to practice self-sufficiency and buffer against discrimination. Two examples of this in practice are the Finn Halls and the Fort neighborhood. The Finn Halls were a center of community life for newly immigrated Finnish Americans. They facilitated a sense of social cohesion and cultural connection for the Finnish American community. People often played music and danced together in these Halls. These cultural practices brought people together and fostered a sense of belonging. The community also encouraged assimilation into the wider community through sports such as basketball. Young Finnish Americans could be more connected to their non-Finnish peers through the sport, while still staying connected to their Finnish community.[40] The Sicilian American community in the Fort lived a deeply communal life that preserved cultural and religious practices from home. The

[38] *No Pretty Prayer*.
[39] Anonymous, Interview #12.
[40] *Finn Halls*.

ties were so strong that to this day community members feel that "the spirit of this place has come to inhabit them."[41] This fishing community lived communally, sharing food, caring for each other's children, grieving loss together and nurturing a sense of belonging for each member of the community. On the Fort, people felt like they "were somebody" because everyone was seen as an important part of the community.[42]

Looking further back in time, Cape Anners can turn to the histories of Native Americans and African Americans who lived and died on Cape Ann. This exploration can lead to a new relationship between current Cape Ann residents and their home. Reckoning with the culture of erasure that has swept away the history of these groups can allow for new insights and better questions that inform pathways forward.[43] Individuals and groups in Cape Ann who are sitting with this history have found it beneficial for revealing the covert and overt ways that deep-seated injustice permeates society. White people also benefit from this because it allows for ways of thinking and acting that are liberating for all people. Dominant culture often thrives off of "urgency, paternalism, perfectionism, individualism, defensiveness, fear of open conflict, and worship of the written word at institutional and interpersonal levels."[44] These elements of culture can create environments that uphold many forms of inequality. From our interviews, it is clear that white residents also feel shut down and shut out when they do not fit certain molds of respectability. One example of how this shows up is the disrespect that fishermen face when trying to speak up in town halls, or the casual dismissal of the fishing industry as having a place in the future. Rooting out - or at least recognizing - classism and elitism is deeply tied to rooting out - or at least recognizing - racism and ethnic prejudice.[45] The Gloucester Racial Justice team is a local group that is partnering with local organizations to understand how a racial justice lens can become a part of their practice so that multiple forms of oppression can be addressed and worked through.

Many groups have searched for a sense of belonging on Cape Ann. Below are some words that inspire a vision of what it means to belong:

"I think it means fundamentally we come to see each other in different ways. Not as the ins and the outs, not as the members and the strangers, the labelers and the ones who are labeled, but as a single community, diverse, each of inestimable worth, but equal. Or on another level, I think it means we do much more than just share space, we actually share lives. We enter into relationships with one another. We're not just co-located but we remain involved in each other's lives…There's an important difference between inclusion and belonging. It's the difference between being present and having a real presence. It's the difference between making room for

[41] *No Pretty Prayer*.
[42] *No Pretty Prayer*.
[43] Mary Lepionka, "Native American History."
[44] Fang et al., "Centering Equity in Climate Resilience Planning and Action."
[45] Anonymous, Interview #13.

someone when they arrive and missing them when they fail to arrive. It's the difference between welcoming someone's presence and actually aching for their absence."[46]

Economic Organizations

The main economic sector in Cape Ann is the Blue Economy.[47] A Blue Economy is defined as "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs and ocean ecosystem health." This includes coastal tourism, living resources, marine transport, marine construction, boat repair, and offshore minerals. The two most prevalent sectors of the Blue economy on Cape Ann are tourism and the fishing industry. In recent years, there has also been a push to invest in a greater marine sciences and technology cluster.

In 2020, the Living Resources industry employed roughly 1,400 workers on the North Shore. Gloucester is the 20th largest port in the U.S. and the largest port in New England (ranked by the value of its catch). Gloucester continues to be the #1 port for groundfish in New England and the #1 port in Massachusetts for lobster landings. In 2017 a new two-story processing building and lobster storage tank was built on Gloucester Harbor. Fiscal shortfalls faced by the Fishing Industry are discussed in the Community Challenges segment of this paper.

Coastal Tourism & Recreation employs over 14,350 workers on the North Shore. The restaurant industry accounts for the majority of workers in this sector, followed by hotels and marinas. The largest contributor to North Shore visitor expenditures is Gloucester, bringing in rough $112M per year. Tourists are specifically attracted to Cape Ann because of its rich 400 year old artistic and maritime history, the notoriety of the fishing industry publicized in "Wicked Tuna" and "The Perfect Storm", wedding venues, cultural events, and the Beauport Hotel[48]. Local Options Rooms Tax and Meals Tax have increased between 2011-2021, a 12 percent increase in Room Tax in 2017 was attributed to Gloucester's Beauport Hotel opening in June of that year. It is important to note that although Coastal Tourism & Recreation represents 87 percent of the regional Blue Economy employment, it is also the lowest paying industry with average annual wages around $24,979.

There is a growing presence of the Marine Science and Technology sector in Cape Ann[49]. This sector includes robotics, oceanography, energy production, and biotechnology. There are 8 companies on Cape Ann that operate in the Marine Sciences and Technology field. The number of Marine Science and Technology patents issued to businesses in a region is a metric of the vitality of this field regionally. Between 2008 and 2018, 14 patents were approved for businesses

[46] Fang et al., "Centering Equity in Climate Resilience Planning and Action."
[47] David R. Borges et al., "North Shore Blue Economy Phase I: Findings & Vision Forward."
[48] "The Changing Nature of The Visitor Economy in Gloucester Massachusetts."
[49] David R. Borges et al., "North Shore Blue Economy Phase I: Findings & Vision Forward."

located in the North Shore, this included 24 inventor credits, 7 of which went to Cape Ann businesses. The most common type of patent issued between 2008 and 2018 was for various types of maritime equipment. Massachusetts government agencies have provided Cape Ann Marine Science and Technology businesses with support. For example, the Gloucester Marine Genomics Institute was given $3 Million to fund research and development and $940K to develop a biomanufacturing training facility at the Gloucester Biotech Academy. A growing Marine Science and Technology sector has the potential to provide more high paying jobs to the Cape Ann region.

Collective Efficacy

The Cape Ann community exhibits collective efficacy (social solidarity, dense social networks, many civic organizations, and a shared sense of responsibility for community problem-solving). One way that social services organizations build collective efficacy is through bi-monthly meetings to share resources. These organizations often serve the same clients and use these meetings to figure out how to best support each other in providing services instead of functioning as isolated organizations or competitors. In these meetings, new ideas are shared and challenges are worked through. At times, these meetings also include the local police and fire departments to discuss providing emergency services for people in critical conditions. These meetings allow for organization members to get to know each other and see how their work fits into the greater social landscape of Cape Ann. It creates a process of action, reflection and collaboration that allows for organizations to expand their services organically, in response to the needs of the community, as well as collaborate with new organizations.[50]

The Open Door is a food justice organization that aims to alleviate hunger in the North Shore community. Their engagement in collective efficacy centers around being a trusted community partner. Other organizations in the North Shore know that they can reach out to them for guidance on local hunger relief initiatives and local governments can reach out for emergency food supplies. The North Shore Community College is one partner that reached out after conducting a study that found that 70% of their students experienced food insecurity. The Open Door was able to expand their Mobile Market to The North Shore Community College campus to address this need. As an organization, they have also created a system that allows people of many different walks of life to share space. This is through their volunteer program and carceral community service program. The Open Door has an ecosystem of volunteers who may not otherwise interact with each other, but are able to come together and work towards providing a needed service for people in their community.[51]

Awesome Gloucester is another organization that uses a trust based approach to foster collective efficacy. The Gloucester chapter of the Awesome Foundation comes together monthly for a pitch night in which three pre-selected community members pitch their idea for improving

[50] Anonymous, Interview #1; Anonymous, Interview #10.
[51] Anonymous, Interview #10.

the community. The winner of the pitch night walks away with $1000 to fund their project. Funded projects range from Fiesta games, tree planting, after school programs, to collecting warm clothes to donate to people in need, and community arts initiatives.[52] The funds for Awesome Gloucester are contributed by 20 trustees who each contribute $50 a month. At each pitch night these trustees stand in a circle and each say who they would vote for and why. There is a culture of deep listening created in these circles. After everyone has spoken a vote is taken and the winner gets cash to work on their project. The intention of this group is trust-based grassroots democracy that distances itself from extractive economic practices. In this case, trust based means that the recipients of these funds do not need to report back to the trustees on how their funds were used. They are trusted as honest and well intentioned members of the community. Interest in this initiative has stayed steady since its inception with around 15 projects being proposed monthly, and Gloucester ranks third in total number of funded projects among Awesome Foundation chapters.[53]

Local churches also exhibit strong collective efficacy. Two pastors that we interviewed head churches that are inclusive of LGBTQ+ people in their church bylaws. When this bylaw was first introduced into one church it faced opposition. Bible study spaces were created for all interested church members to attend and read sections of the bible together to collectively learn about Jesus's teachings. The ground rule for this study space was that everyone promised to stay at the table - this meant being mindful of your own feelings and also how your words might impact others. This study space took everyone's questions seriously, allowed for discussion and disagreements, and eventually led to a collective understanding of the selected Bible passages. This process took many months, and special efforts were made to meet with parishioners outside of church spaces to get to know them as individuals. Over time, people who were opposed to this bylaw were transformed by these study spaces and conversations and accepted the bylaw.[54]

The fishing industry on Cape Ann has strong collective efficacy and success mobilizing to promote the welfare of local fishermen facing numerous challenges such as permit restrictions, the loss of a local processing plant, and an aging workforce. The full extent of these challenges is discussed in the community challenges section of this paper. Three primary organizations in Cape Ann work as advocates for fishermen: Fishing Partnership Support Services (FPSS), The Gloucester Fishermen's Wives Association (GFWA), and the Massachusetts Fishing Partnership.

Fishing Partnership Support Services has been highly successful at crossing boundaries, working with both health policy experts and fishermen. The greatest accomplishment of FPSS is their acquisition of health care for Massachusetts fishermen[55]. As independent non unionized laborers working in an extremely dangerous sector, fishermen are one of the most difficult populations to insure. As a graduate of the Harvard Kennedy School, JJ Barlett, the president of FPSS, worked with the state of Massachusetts and Gloucester Fishermen's Wives Associations to obtain healthcare for fishermen. The health care plan was funded by the state and federal

[52] The Awesome Foundation, "The Awesome Foundation: Gloucester, MA."
[53] Anonymous, Interview #3.
[54] Anonymous, Interview #2; Anonymous, Interview #11.
[55] Will Bachman, "J.J. Bartlett, Fighting for Fishing Families."

government and reduced the rate that fishermen paid on average by 60%. The cost of coverage was done on a slide scale based on fluctuations in industry income. This project informed the Affordable Care Act, which eventually covered fishermen. FPSS also hosts vaccination events on the wharf and Narcan training.

The Gloucester Fishermen's Wives Association started Cape Ann Fresh Catch in 2008 which is a local fish market that allows fisherman to directly sell to consumers which guarantees "steady income for the fishermen while providing customers with fresh, locally caught seafood and promoting sustainable fishing practices by fostering a direct connection between the consumer and the source of their food; often highlighting transparency in fishing methods and supporting local ecosystems[56]." GFWA also created a permit bank to address the difficulty in acquiring permits for select fish species such as cod[57]. When permits become available for purchase from NOAA GFWA has funding set aside to purchase extra permits so that fishermen are able to purchase additional permits from GFWA without a markup. Otherwise fishermen are forced to buy permits from individuals reselling at a markup. In 2023, Angela Sanfilippo, the president of GFWA, was honored by President Biden in the Rose Garden of the White House for her support of Alaska fishermen advocating for the protection of Bristol Bay's sockeye salmon fishery from a proposed open-pit gold and copper mining project near the bay's headwaters[58]. Massachusetts Fishing Partnership has mobilized fishermen and their families to oppose offshore wind to protect the vitality of the local fishing industry and has organized collaborative research of fisheries populations between fishermen and Harvard researchers[59].

Maintaining collective efficacy can be challenging. People and organizations exist within a complex web of allies, partners, neutral figures, and challengers - connected but not always in agreement. In the focus groups we conducted, it was apparent that these individuals were all passionate about improving the lives of Cape Anners even though they did not always agree with each other. They showed this through listening to each other, expressing themselves passionately, a willingness to challenge others and be challenged, and creating moments of repair when differences of opinions became arguments.

Islanded Community

The coastal geography of Cape Ann inspires residents to view it as an 'islanded community'. The islanded nature of Cape Ann creates a sense of mutual familiarity due to physical proximity and isolation from other regions. Different groups form and band together as sub-groups within the community, each carrying a deep connection to place. These overlapping subgroups comprise the larger community.[60] The abundance of family owned businesses and nonprofits maintain a deep

[56] "Community Supported Fishery (CSF)."
[57] Azure Cygler, "Gloucester, MA | National Oceanic and Atmospheric Administration."
[58] Ethan Forman, "MASSACHUSETTS: Sanfilippo Invited to Rose Garden for Salmon Fight - Saving Seafood."
[59] "Massachusetts Fishermen's Partnership – A Voice for Massachusetts Fishermen."
[60] Antonio Raciti, "The Gloucester Downtown Planning Databook."

sense of local involvement in the social and economic wellbeing of the community. Regarding this sense of community, a community member reflects: “we belong to each other, and on a little island like ours we take care of each other.”[61]

Polarization and the Loss of Social Capital

The Cape Ann community experiences divisions along the lines of ethnicity, class, politics, occupation and immigration timelines. Many people feel that the divides between people have deepened over the last decade due to intensified national political polarization. There are spaces where people from different walks of life interact on Cape Ann, however these sorts of interactions alone are not adequate to solve the deeper cleavages in the community. Residents seem to be seeking more intentional spaces for diverse groups of people to come together and discuss their lived experiences. The goal of these spaces would be to better understand each other as individuals and identify common goals as a community. These spaces for care, curiosity and common cause in the public sphere are still underdeveloped.[62]

Official channels to participate in community affairs such as town hall meetings are also not currently up to this challenge. Many residents feel alienated from these spaces and unable to voice their concerns. Official rules that limit speech length and unofficial norms that regulate speech and expression both contribute to a sense of frustration and isolation from the political system. The local governments on Cape Ann can play an important role in rebuilding a sense of trust and interest in engagement. Some residents suggest that more local engagement at the ward level could help trickle up trust and engagement. Another source of frustration that residents feel is when plans are created with resident input but never implemented. This creates a sense of disempowerment and further pushes people away from participating in future planning efforts. This sentiment of disempowerment trickles into residents’ willingness to volunteer on commission boards. Some people do not want to volunteer on commission boards because they feel they will be shut down and ignored by elected officials and consultants. Lack of engagement results in lower levels of social capital and collective efficacy.

As mistrust grows, social capital erodes. The disintegration of social capital on Cape Ann can also be seen through an intensifying culture of individualism. One example of this can be seen through housing renovations. In the past, people would consider their neighbors access to pretty views when making decisions about renovating their home. Even if there were no regulations that prohibited certain design choices, neighbors would choose to prioritize their neighbors' access to views of the landscape instead of creating a renovation plan that would block that access. Anecdotally, this type of consideration for neighbors has decreased.

For all the issues discussed here, there are dialogue facilitators on Cape Ann that help facilitate tense conversations between groups. Their goal is to restore a sense of collective efficacy and bring people together. Using this resource in more spaces can help move the

[61] Anonymous, Interview #2.
[62] Anonymous, Interview #12.

community from tension and mistrust towards understanding and communal action. Although this sounds difficult, there are examples of success from across the country. One example that stood out to our team was Steamboat Springs, Colorado's dedication to maintaining a sense of community after wolf reintroduction threatened to divide the town. In the face of intense political polarization, community groups, Colorado Parks and Wildlife, and Colorado Extension officers relentlessly dug in their heels, refusing to allow the town square to dissolve. Potentially their most successful tactic was a tireless schedule of community events with no greater purpose than to bring people from different walks of life together. For more information on this case and a list of community events see the appendix (Appendix 1).

Community Engagement/Solidarity

The municipalities on Cape Ann have different engagement practices. Recent issues such as Multi-Family Zoning Requirements for MBTA Communities (commonly known as 3A)[63] were handled very differently by municipalities. Manchester-by-the-Sea took an iterative approach to community engagement through frequent open meetings where feedback was taken from residents and implemented into future public meetings. This continuous process of refinement allowed residents to see that their opinions were valued, and also gave space for questions to be asked, and misunderstandings to be addressed. Gloucester, on the other hand, had very few public meetings, which resulted in misunderstandings, opportunities for fear mongering and polarization to impact public discourse, as well as rising tensions between residents, and between residents and city officials. Some public officials have shared there is a need for more institutional support so that they can best engage with the public without feeling overstretched in their role.

Municipal plans often require engaging the public and considering how the plan impacts vulnerable populations.[64] When required, planners do hold community engagement events, however, many residents still do not feel meaningfully engaged. Many residents do not want one off engagement events, they want to be meaningfully engaged in a process where they can shape the formation and implementation of local plans.[65] Even well intentioned planners can fall into utilizing engagement tactics that do not align with this purpose. Residents who participated in the planning process of The Community Development Plan for the City of Gloucester, 2001 highlighted some key features of this plan that made them feel included in the planning process and represented by the final plan publication: 1) the planning process was led by widely trusted community member, not an outside expert, 2) the engagement process lasted two years allowing trust to be built gradually, 3) engagement efforts sought out community members in their

[63] Executive Office of Housing and Livable Communities, "Multi-Family Zoning Requirement for MBTA Communities."
[64] Executive Office of Energy and Environmental Affairs, "Municipal Vulnerability Preparedness (MVP) Program."
[65] Anonymous, Interview #13.

neighborhoods and workplaces opposed to requiring community members to come to locations more convenient for the planners, 4) opposition and disagreement was welcomed, 5) stakeholders whose opinions differed were brought together for dialogue. This approach was estimated to have engaged over 1500 residents in the planning process. This project was led by Janis Stelluto, the head of the Planning Board at that time. Residents highlight her ability to meet people with curiosity, often asking "I don't understand, can you help me understand?" when confronted with frustrated or oppositional community members gave her the ability to gain the trust of many people. This suggests that the interpersonal skills, desire to truly include all community members, time, coalition building and bridging between communities are important aspects of effective community engagement.

Fiscal Shortfalls

The fishing industry has faced considerable challenges over the past decade that has contributed to the economic decline of the sector. In the 1980s, Gloucester was one of the largest ports in the country, with their cod populations being renowned[66]. However, over the past 10 years, Massachusetts cod landings decreased over 88 percent. According to NOAA, the groundfish trawl sector has decreased by over half in the past decade and the gill netting sector is so small that it is no longer distinguished as its own sector. This is in large part due to a more than 90 percent reduction in quota for cod in recent years. NOAA began restricting fishing permits in Massachusetts roughly a decade ago, with cod, flounder, and haddock being amongst the most regulated species. Commercial groundfish fishermen must acquire a limited access permit to fish in the area. If they fulfill their quota for a particular species they must acquire another permit to continue fishing for any species because of concerns regarding bycatch[67]. Private individuals unrelated to the fishing industry have begun buying these permits in order to resell them at an increased price to fishermen who have fulfilled their existing permit quota. NOAA also recently instituted an Observer Program that forces fishermen to notify NOAA 48 hours before they plan to go fishing so that they can be assigned an observer[68]. These observers collect biological data and are charged with the task of ensuring that fishermen follow all NOAA regulations. Fishermen are responsible for paying for the observers' time, equalling roughly $700 per day. This charge is at times more than the value of the day's catch. Gloucester also lost its seafood processing facility which greatly hurt the industry. These challenges have led to a considerable decline in Gloucester's catch since the 1980s and mounting fiscal hardship for fishermen.

Successes and Failures

[66] David R. Borges et al., "North Shore Blue Economy Phase I: Findings & Vision Forward."
[67] Angela Sanfilippo, Lunch with Fishermen's Wives.
[68] Marcia Perkins, "Changing Tides #1 with Marcia Perkins."

Different approaches to community engagement impact the outcome of projects. The eventual success of a project can be determined by factors such as the form of engagement, communication of technical information, the scope of the project, and the wider political climate. In cases such as Masconomo Park in Manchester-by-the-Sea, residents were able to learn about the various vulnerabilities in the entire downtown. After gaining this comprehensive view, they explored what approaches to take in addressing the climate vulnerability of a specific site - Masconomo Park. Having the additional context of the entire downtown area, residents were able to see this project in its larger context and weigh options at this site and between this site and others in the downtown area. This allowed residents to make a more holistic decision that took into account more complex tradeoffs in the downtown area.

Many projects do not include the public until plans are already underway. Apple Street in Essex is an example of a project that included the public at a later stage. This delayed inclusion of the public, made people feel like they were just being asked for approval. The technical drawings presented to the community were confusing and became counterproductive in explaining the scope of the project. This eventually ended in a lack of support and the Apple Street project was stopped. Through this project community members took an interest in the Causeway which was also shown in maps presented in the Apple Street project. For this project, community members were included in the beginning of the planning process and no longer feel like they are just being asked for approval to push a project forward. These examples show that metrics of success and failure can change. Sometimes a project that seems like it will be a great success fails, and other times projects that fail lead to a different approach or project that is successful.[69]

Media engagement and communications

There many forms of engagement and communication happening on Cape Ann. Community members can read local newspapers such as The Gloucester Times and The Gillnetter (a newspaper run by Gloucester High School students), listen to Good Morning Gloucester or Cape Ann Conversations (local podcasts), and view content created by 1623 Studios (a local media outlet focused on creative productions, highlighting non-profits, local events and government meetings). Residents can also keep up with local discourse through social media such as Facebook and local town meetings. Community members also learn about local life through mingling in restaurants and bars that attract people from many different walks of life.

Recommendations

Community members, organizations and municipalities can all implement insights from environmental justice, disaster studies, and political sociology literature into their preparation for future climate events. Scenario 0 imagines a business as usual approach towards a Great Storm

[69] Office For Urbanization, “Resilient Practices: Developing Local Capacity (Four Case Studies).”

of 2038. In this approach collective efficacy fluctuates, the social dimensions of climate disaster are largely ignored, vulnerable populations are left to bear the brunt of climate impacts and have very little say in the disaster mitigation mechanisms, social services providers are unprepared and overburdened, and mistrust between the local government and residents deepens. Scenario 1 imagines an adoption of environmental justice, disaster studies and political sociology practices. In this scenario, collective efficacy increases, community members (especially those who are the most vulnerable) are included in setting the direction of municipal plans and are seen as collaborators throughout the process of implementation, the brunt of climate disaster is not borne by vulnerable groups, social infrastructure is developed to address the needs of the community, and the local government and residents work as collaborators. This comparison serves as a reminder that destruction from disaster is not inevitable, there are ways of mitigating the direct impacts and ripple effects of extreme weather events.

Researcher Antonio Raciti interviewed many downtown Gloucester residents and recent immigrants. His work identified some steps forward that could help further develop collective efficacy. Although directed specifically at the Downtown Gloucester community, these objectives can be applied to the wider community as well. These objectives included: 1) conducting a city-wide mapping initiative led by a coalition of grassroots organizations to define community values and assets, 2) encourage intergenerational and intergroup organizing to bridge between stakeholders, 3) establish a downtown governance committee that can speak to the values and preferences of downtown residents and help protect ecosystems and make decisions in light of climate change, 4) create a downtown housing taskforce (downtown residents + housing related organizations + researchers on alternative forms of housing) to enlarge the housing portfolio, 5) achieve energy independence - Energy Community Steering Committee, 6) Become more than a sanctuary city (have more services for immigrant communities, language translation of public meetings). The goal of these projects is for them to be highly participatory and led by community members at the grassroots level. Raciti's reasoning for this is because "skepticism and doubts about existing decision-making processes can only be overcome if concrete projects (fortunately achievable in scope) take place with the endorsement of groups and coalitions collaborating across cultural, intellectual, family, generational, and other clusters and networks."[70] To this we would add that community members can be engaged as problem-solvers in the development of specific projects, if they are engaged early, in a place-based way, and with an attitude of learning.

Bridging between groups is an important aspect of building trust. The Bridging Differences Playbook published by the Greater Good Science Center at Berkeley lays out how bridging skill sets can be useful within the public sphere, political debates and also personal relationships. It walks through the different skill sets that can be utilized at the interpersonal, intrapersonal and also intergroup levels to be better positioned to engage in dialogue. Bridging needs to be approached with humility. The purpose of bridging is not to convince another person of your perspective, or even necessarily to build consensus. Its purpose is to understand a

[70] Antonio Raciti, "The Gloucester Downtown Planning Databook."

person's perspective. Bridging efforts may still result in disagreement, however the main goal is not to dehumanize someone for their different perspective. In this work, even modest shifts are seen as valuable since they are indicative of progress that can be built upon. As someone who is entering into a bridging practice or conversation, it is important to enter with a willingness to be transformed and readiness for vulnerability. Not everyone is ready to be a part of bridging. Sometimes unhealed trauma can and impact an individual's ability to exhibit these attributes. It is also important to be sensitive to power dynamics within bridging efforts, paying special attention that those who are being denied social power or are discriminated against are not being subjected to potentially exploitative or otherwise harmful situations. Experts suggest that leading with compassion and seeing these efforts as an ongoing journey can help to bridge deep divides.[71]

Bonding is another important aspect of bringing people together to address polarization. When trying to facilitate bonding between different groups, it is important to "engage their social differences rather than minimize or avoid them." This means viewing unity in diversity as a goal instead of unity in sameness. This requires encouraging a culture of equality and equity within spaces so that people are able to contribute their unique talents and perspectives. One way to bring people together is through sharing cultural activities such as music, dancing and games. These activities are familiar to all cultures, but each locality might have slight variations. This affirms both differences and commonalities between cultural forms leading to greater bonding.[72]

Bridging and bonding are in tension. This tension is illustrated by Ron Burt's theory of structural holes described in *Brokerage and Closure*[73]. Burt argues that although both bridging and bonding social capital are essential on their own, neither is sufficient without the other. Too much bonding social capital (referred to as closure by Burt) without bridging social capital (referred to as brokerage by Burt) can lead to organizational conformity and a lack of fresh ideas. Conversely, too much bridging without bonding can lead to organizational instability, distrust, and a lack of coordination. Burt asserts that the most successful organizations are those that bridge across structural holes while maintaining closure. This allows the organization to gain novel insights and access to unique resources while also maintaining the strength of internal ties. According to Burt, the best way to manage the tension between bridging and bonding capital is not to choose one over the other but to maintain a strategic balance between them. This is often facilitated by an actor called the *broker with closure*; a person embedded enough in the organization to maintain trust and legitimacy while creating relationships with new groups.

Dialogue is another important tool for building trust. There are trained dialogue facilitators on Cape Ann who help to facilitate challenging dialogue. They understand the local context and have been involved in many different types of dialogue facilitation across Cape Ann. Inviting a facilitator to a space or attending a dialogue facilitation training can help individuals to strengthen their ability to bring people together for challenging conversations. Their experience shows that inviting curiosity, complexities, and stories is an important foundation for dialogue.

---

[71] Greater Good Science Center, "Bridging Differences Playbook."
[72] Brad Fulton and Richard Wood, "Bridging Social Divides: A Promising Approach to Increase Social Cohesion in a Polarized Society."
[73] Burt, *Brokerage and Closure*.

Communities that don't interact can be brought together through borrowing the trust of someone who can act as a bridge between the two communities. Instead of trying to create new spaces for dialogue, dialogue facilitators find that it is best to try to embed it into spaces that already exist (ie. closed conversations that could be opened up to more groups, spaces of tense interactions between groups can invite a dialogue facilitator). By repeatedly using this technique, a norm of deep listening and coming together can be built over time. Repetition can make dialogue a cultural norm.[74]

It is important to recognize that power dynamics impact dialogue. Research has shown that perspective-talking and perspective-giving are two important aspects of dialogue. Minority groups benefit the most from being able to share their personal experiences and perspectives to a member of a dominant group who is then able to repeat back what they have heard. This practice is called perspective-giving and allows for members of marginalized groups to feel understood. This feeling contrasts the usual sense of dismal experienced by minority groups in society. Members of dominant groups benefit most from perspective-taking. Perspective-taking is the practice of taking on the perspective of someone else and being able to repeat back to them what they have understood. Perspective taking and giving practices have been useful for individuals whose identities are implicated in identity based social conflicts.[75]

Feminist approaches to organizing are also powerful for building trust between groups. Alexandra Piñeros Shields coined the term 'Midwife of Power' to describe the role of a community organizer as a guide whose role it is to " to identify the strengths of the individuals and communities she is working with and leverage them to advance an organizing agenda/campaign. By collectively labouring to imagine life-giving processes and just policies, people are able to experiment, to experience their agency, to understand themselves as powerful. But birthing power is not easy. It's hard work. Sometimes it's painful, even dangerous. Usually, a step forward is followed by multiple steps backwards. Often, people do not believe they will be capable of their role in a campaign. They may not believe that they can create strategy or actually make a difference. They have been told, in many ways, that they are not capable or intelligent. Their dignity has been denied them so many times they cannot see their own power."[76] This approach views all people as already powerful, but needing guidance to step into their innate power. This changes how opponents are seen. It disrupts the victim and villain thinking, and instead sees people as being in community with each other. This allows for vulnerability to be a shared practice between groups. In one case, an initially resistant police chief attended an anti-bias workshop after it became clear that organizers were being open about their need to also address internalized biases. By seeing that they both shared a common challenge they could

[74] Anonymous, Interview #1.
[75] Bruneau and Saxe, "The Power of Being Heard: The Benefits of 'Perspective-Giving' in the Context of Intergroup Conflict."
[76] Pineros-Shields, "'Midwife for Power': Towards a Mujerista / Womanist Model of Community Organizing - Brandeis University."

come together to discuss their common challenge instead of one group imposing a sense of morality on the other.[77]

We summarize our recommendations in the table below.

Prior Research	1. Conduct a city-wide mapping initiative led by a coalition of grassroots organizations to define community values and assets
	2. Encourage intergenerational and intergroup social events to bridge between stakeholders
	3. Establish a downtown governance committee that can speak to the values and preferences of downtown residents and help protect ecosystems and make decisions in light of climate change
	4. Create a downtown housing taskforce (downtown residents + housing related organizations + researchers on alternative forms of housing) to enlarge the housing portfolio
	5. Achieve energy independence - Energy Community Steering Committee
	6. Become more than a sanctuary city (have more services for immigrant communities, language translation of public meetings)
Utilize Bridging Technique	7. Intrapersonal: Assume good intentions, practice mindfulness, expand your activities, seek and promote counter-stereotypical information, focus on individuality not group identity
	8. Interpersonal: Listen with compassion, put people before politics, perspective-giving and taking, find shared identities, understand values, try self-distancing
	9. Intergroup: Create conditions for intergroup contact, identify common goals, focus on solutions not identities
Utilize Bonding Technique	10. Engage in cultural activities
Dialogue	11. Get help from trained dialogue facilitators
	12. Get trained to become a dialogue facilitator
	13. Invite curiosity, complexities and stories into spaces
	14. Borrow the trust of someone you know to access communities that you don't have a relationship with
	15. Use perspective-taking and perspective-giving
Feminist Organizing Approaches	16. Identify the strengths of individuals and communities, and view all people as innately powerful
	17. Lead with vulnerability, as no one knows everything

[77] Bruneau and Saxe, “The Power of Being Heard: The Benefits of ‘Perspective-Giving’ in the Context of Intergroup Conflict.”

In closing, we hope that our report is useful and actionable for Cape Anners building and rebuilding social infrastructure for resilience. The core capacities and social resources of the Cape Ann community constitute a foundation for the implementation of best practices from the fields of environmental justice, disaster studies and political sociology. These practices offer tools for the municipal governments to strengthen engagement with civic and community leaders, as well as the public, in decision-making processes related to extreme weather and climate impacts. Imagining, anticipating, managing, and recovering from extreme weather events are all best understood as pragmatic social processes. While our report on these processes takes the form of a standard academic "white paper," we note that our frameworks and recommendations could themselves be used in various ways by various community members. For instance, webpages, workshops, playbooks, podcasts, films, or reports in the *Gloucester Times can all be helpful*. The next steps toward building climate resilience on Cape Ann through social processes are up to Cape Anners.

Appendix: The Case of Wolf Reintroduction in Colorado

In 2020 wolf reintroduction was proposed on the Colorado ballot as Proposition 114, which narrowly passed with a 0.98% margin[78]. A vast majority of dissenting voters resided in rural counties. This created intense political distrust, anger, and resentment. Wolves were to be reintroduced to rural regions of Colorado; however, rural residents had not voted for their reintroduction. This anger was predominantly directed toward urban and suburban residents who had voted in favor of the proposition. Wolf reintroduction was controversial in rural areas because of its negative impacts on livestock production. Studies have shown that the indirect impacts of predator presence are more economically costly than the direct predation of livestock[79]. Research suggests that the primary indirect costs of wolf reintroduction on ranching are decreased weaning weights, conception rates, and meat quality; and increased sickness in cattle, management expenditures, and labor cost[80]. One study analyzing an enterprise budget representative of a 400 head calf-cow ranch in Wyoming simulated the known indirect and direct costs of wolf reintroduction. The model used suggests that the direct and indirect cost of wolf reintroduction could decrease the average gross margin of a comparable operation by approximately 52%[81].

The rural-urban divide in the state continued to widen after the ballot measure was passed. In lieu of the impending 2023 reintroduction date, Colorado Parks and Wildlife (CPW) hosted wolf management meetings throughout the state to present their work on possible plans for mitigating depredation events and solicit feedback from ranchers. On a November morning in Routt County Colorado, ranchers pulled up to the Steamboat Springs library to attend a community meeting with CPW. As they entered the building they were met with armed guards

[78] "Colorado Proposition 114, Gray Wolf Reintroduction Initiative (2020)."
[79] Steele et al., "Wolf (*Canis Lupus*) Predation Impacts on Livestock Production," September 1, 2013.
[80] Macon, "Paying for the Presence of Predators."
[81] Steele et al., "Wolf (*Canis Lupus*) Predation Impacts on Livestock Production," September 1, 2013.

and forced through metal detectors. These ranchers arrived expecting to engage in constructive conversation. Instead, they were profiled, searched, and lectured for three hours. It's interactions like these that perpetuated rural citizens' resentment, distrust, and alienation in Colorado.

It has now been roughly five years since Proposition 114 was passed and 2 years since wolves were reintroduced. This is an issue that had the potential to permanently divide a small town like Steamboat Springs, made up of even parts generational ranchers and wealthy ski transplants. Tension still exists but more importantly, so does the enduring sense of community that has always bridged the divide between these two groups. In the face of intense political polarization, how was this relationship preserved? Community groups, Colorado Parks and Wildlife, and Colorado Extension officers relentlessly dug in their heels, refusing to allow the town square to dissolve. Potentially their most successful tactic was a tireless schedule of community events with no greater purpose than to bring people from different walks of life together. Listed below are some of the events that stood out. As we argue in our report, resilience depends on collective efficacy; social ties support collective efficacy; and social events create and maintain social ties.

Coffee with Cattlemen - Hosted by the Cattleman's Wives every first Thursday morning of the month, this event invites the general public to chat with local ranchers about beef production and local agriculture.

Cowboy Downhill - "A unique annual ski event held at Steamboat Ski Resort in Steamboat Springs, Colorado. It features professional rodeo cowboys and cowgirls competing in a ski-based event that blends skiing with a bit of Wild West fun."[82]

Ag Appreciation Week - "Agriculture has played a big role in shaping the identity and landscapes of the Yampa Valley and CAA believes in the importance of celebrating this heritage and the hard work that is still being done to sustain agricultural production in Northwest Colorado. Each year, in recognition of National Agriculture Day, CAA brings the community together through a weeklong series of events that celebrate agricultural production and the role it plays in our community."[83]

- Events: Ag film night (movie night about the regional history of agriculture), happy hour at local brewery, community breakfast featuring local food, chicken butchery class, and a regional food systems panel discussion

Winter Carnival- "The Winter Carnival, proudly hosted by the Steamboat Springs Winter Sports Club and Yampa Valley Bank, brings the community together to celebrate athleticism and winter, showcasing Steamboat's Western traditions and ski heritage. First established in 1914, the original intent of Winter Carnival was to help forget the hardships of winter, chase away the shorter days, and bring happiness back to a valley plagued by snow."[84]

Moots Ranch Rally - A gravel bike ride of 200 riders sponsored by a local bike manufacturer that raises money for a local agricultural nonprofit and educates riders about the local

[82] "Cowboy Downhill | Steamboat Springs, CO."
[83] "Ag Appreciation Week."
[84] "Steamboat Springs Winter Carnival."

agricultural industry. “The Ranch Rally isn’t just a ride — it’s a community fundraiser that supports the Community Agriculture Alliance (CAA), a local nonprofit dedicated to preserving and promoting the agricultural heritage of the Yampa Valley. This land has been cared for by ranching families for generations, and their stewardship has helped preserve the open spaces we ride through today. We’re proud to partner with the CAA to honor that legacy and help keep our community connected to the food and land that sustains it.”[85]

References

107. J.J. Bartlett, Fighting for Fishing Families. Accessed June 23, 2025. https://html5-player.libsyn.com/embed/episode/id/32961132/height/26/theme/standard-mini/thumbnail/no/direction/backward/.

Angela Sanfilippo. Lunch with Fishermen’s Wives, March 4, 2025.

Anonymous. Interview #1. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #2. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #3. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #7. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #10. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #11. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #12. Interviewed by Amelia Linton. Cape Ann. 2025

Anonymous. Interview #13. Interviewed by Jason Beckfield, Amelia Linton, Samantha Wyman. Cape Ann. 2025

Anonymous. Interview #14. Interviewed by Amelia Linton. Cape Ann. 2025

Antonio Raciti. “The Gloucester Downtown Planning Databook.” University of Massachusetts Boston, 2023.

Azure Cygler. “Gloucester, MA | National Oceanic and Atmospheric Administration.” NOAA Fisheries, October 16, 2012. https://voices.nmfs.noaa.gov/location/gloucester-ma?order=field_date_of_interview&sort=desc&page=2.

Ballotpedia. “Colorado Proposition 114, Gray Wolf Reintroduction Initiative (2020).” Accessed June 27, 2025. https://ballotpedia.org/Colorado_Proposition_114,_Gray_Wolf_Reintroduction_Initiative_(2020).n

Brad Fulton and Richard Wood. “Bridging Social Divides: A Promising Approach to Increase Social Cohesion in a Polarized Society,” n.d.

Bruneau, Emile, and Rebecca Saxe. “The Power of Being Heard: The Benefits of ‘Perspective-Giving’ in the Context of Intergroup Conflict,” 2012.

Burby, Raymond J. “Hurricane Katrina and the Paradoxes of Government Disaster Policy: Bringing about Wise Governmental Decisions for Hazardous Areas.” *The Annals of the American Academy of Political and Social Science* 604, no. 1 (2006): 171–91. https://doi.org/10.1177/0002716205284676.

Burt, Ronald S. Brokerage and Closure: An Introduction to Social Capital. Oxford Scholarship Online. Oxford: University Press, 2005.

CAA. “Ag Appreciation Week.” Accessed June 27, 2025. https://communityagalliance.org/events/ag-appreciation-week/.

[85] Elizabeth, “RANCH RALLY 2025.”

Cape Ann Fresh Catch. “Community Supported Fishery (CSF).” Accessed June 23, 2025. https://cafc.fish/.

Case, Anne, and Angus Deaton. “Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century.” *Proceedings of the National Academy of Sciences* 112, no. 49 (December 8, 2015): 15078–83. https://doi.org/10.1073/pnas.1518393112.

Community Resilience Group. “Community Resilience Planning Guide for Buildings and Infrastructure Systems : Volume I.” National Institute of Standards and Technology, October 2015. https://doi.org/10.6028/NIST.SP.1190v1.

“Cowboy Downhill | Steamboat Springs, CO.” Accessed June 27, 2025. https://www.steamboatchamber.com/events/annual-events/cowboy-downhill/.

David R. Borges, Michael Goodman, Katherine J. Kahl, Michael McCarthy, and Elise M. Rapoza. “North Shore Blue Economy Phase I: Findings & Vision Forward.” Glouster Marine Series: UMass Amherst, September 2021. https://www.umass.edu/identity/northshore/NSBE-Report_ADA2b.pdf.

Eienwohner, Rachel, Valeria Chapman, Fernando Tormos-Aponte, and Kaitlin Kelly-Thompson. “Active Solidarity: Intersectional Solidarity in Action.” *ResearchGate*. Accessed June 26, 2025. https://doi.org/10.1093/sp/jxz052.

Elizabeth. “RANCH RALLY 2025: A CELEBRATION OF GRAVEL, COMMUNITY, AND HERITAGE.” *Moots Cycles* (blog), March 31, 2025. https://moots.com/blog/ranch-rally-2025-a-celebration-of-gravel-community-and-heritage/.

Ethan Forman. “MASSACHUSETTS: Sanfilippo Invited to Rose Garden for Salmon Fight - Saving Seafood,” May 19, 2023. https://www.savingseafood.org/news/state-and-local/massachusetts-sanfilippo-invited-to-rose-garden-for-salmon-fight/.

Executive Office of Energy and Environmental Affairs. “Municipal Vulnerability Preparedness (MVP) Program.” Accessed June 27, 2025. https://www.mass.gov/municipal-vulnerability-preparedness-mvp-program.

Executive Office of Energy and Environmental Affairs and Office of Environmental Justice and Equity. “Environmental Justice Populations in Massachusetts.” Accessed June 26, 2025. https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts.

Executive Office of Housing and Livable Communities. “Multi-Family Zoning Requirement for MBTA Communities.” Accessed June 26, 2025. https://www.mass.gov/info-details/multi-family-zoning-requirement-for-mbta-communities.

Fang, Clara, Jessica Hench, Christa Daniels, and Abigail Abrash Walton. “Centering Equity in Climate Resilience Planning and Action: A Practitioner’s Guide.” Accessed June 26, 2025. https://repository.library.noaa.gov/view/noaa/46624.

Finn Halls: The Center of Finnish-American Life on Cape Ann, 2025. https://www.youtube.com/watch?v=Fvk1viXcYMM.

Franco Angeli. “A New Political Generation : Post-2008 U.S. Social Movements and The Revival Of Union Activism.” *A New Political Generation : Post-2008 U.S. Social Movements and The Revival Of Union Activism*, 2024, 59–81. https://doi.org/10.3280/SL2024-170005.

Good Morning Gloucester. “Coastal Flooding.” Good Morning Gloucester, January 14, 2024. https://goodmorninggloucester.com/tag/coastal-flooding/.
Greater Good Science Center. “Bridging Differences Playbook,” n.d.
Gross, Neil. “A Pragmatist Theory of Social Mechanisms.” *American Sociological Review* 74, no. 3 (June 1, 2009): 358–79. https://doi.org/10.1177/000312240907400302.
Hochschild, Arlie Russell. *Stolen Pride: Loss, Shame, and the Rise of the Right*. New York: The New Press, 2024.
Juskus, Ryan. “Sacrifice Zones: A Genealogy and Analysis of an Environmental Justice Concept.” *ResearchGate*. Accessed June 26, 2025. https://doi.org/10.1215/22011919-10216129.
Kendra, James M., Lauren A. Clay, and Kimberly B. Gill. “Resilience and Disasters.” In *Handbook of Disaster Research*, 87–107. Handbooks of Sociology and Social Research. Switzerland: Springer International Publishing AG, 2017. https://doi.org/10.1007/978-3-319-63254-4_5.
Lamont, Michèle. “Addressing Recognition Gaps: Destigmatization and the Reduction of Inequality.” *American Sociological Review* 83, no. 3 (June 2018): 419–44. https://doi.org/10.1177/0003122418773775.
Lavelle, Marianne, and Peter Aldhous. “EPA Funding Cuts Target Disadvantaged Communities, Analysis Shows.” *Inside Climate News* (blog), May 1, 2025. https://insideclimatenews.org/news/01052025/trump-epa-funding-cuts-target-disadvantaged-communities/.
Lorenzen, Janet A., and Emily Drew. “‘We Need Communities of Color’: How Coalitions Can Move from Climate Action to Climate Justice.” *Social Justice Research* 36, no. 1 (March 1, 2023): 103–31. https://doi.org/10.1007/s11211-023-00406-w.
Macon, Dan. “Paying for the Presence of Predators: An Evolving Approach to Compensating Ranchers.” *Rangelands* 42, no. 2 (April 1, 2020): 43–52. https://doi.org/10.1016/j.rala.2020.03.001.
Marcia Perkins. “Changing Tides #1 with Marcia Perkins.” Accessed June 24, 2025. https://podcasts.apple.com/us/podcast/changing-tides-1-with-marcia-perkins/id1229833667?i=1000389778654.
Martin, Adrian, Brendan Coolsaet, Esteve Corbera, Neil M. Dawson, James A. Fraser, Ina Lehmann, and Iokiñe Rodriguez. “Justice and Conservation: The Need to Incorporate Recognition.” *Biological Conservation* 197 (May 1, 2016): 254–61. https://doi.org/10.1016/j.biocon.2016.03.021.
Mary Lepionka. “Native American History,” n.d. https://www.capeannmuseum.org/media/native_american_history_.pdf.
“Massachusetts Fishermen’s Partnership – A Voice for Massachusetts Fishermen.” Accessed June 23, 2025. https://mass-fish.org/.
MassGIS. “Environmental Justice Populations in Massachusetts.” Environmental Justice Populations in Massachussetts. Accessed June 26, 2025. https://mass-eoeea.maps.arcgis.com/apps/MapSeries/index.html?appid=535e4419dc0545be980545a0eeaf9b53.
Mohai, Paul, David Pellow, and J. Timmons Roberts. “Environmental Justice.” *Annual Review of Environment and Resources* 34, no. Volume 34, 2009 (November 21, 2009): 405–30. https://doi.org/10.1146/annurev-environ-082508-094348.

"National Oceanic and Atmospheric Administration." Accessed June 24, 2025. https://www.noaa.gov/.
No Pretty Prayer, 2012. https://vimeo.com/37036013.
Office For Urbanization. "Regenerative Landscapes Report," 2024. https://www.dropbox.com/scl/fi/72i6nmxzghvxjywpxuaot/02_Regenerative-Landscapes-Report.pdf?dl=0&rlkey=g0l5n8m1tggnpc527u22h67uc&st=ld5hmu01.
———. "Resilient Practices: Developing Local Capacity (Four Case Studies)." n.d.
Pineros-Shields, Alexandra. "'Midwife for Power': Towards a Mujerista / Womanist Model of Community Organizing - Brandeis University." Accessed June 26, 2025. https://scholarworks.brandeis.edu/esploro/outputs/journalArticle/Midwife-for-Power-Towards-a-Mujerista/9924116689401921.
Ray, Lamont. "Woman Starts Drive to Aid Car Flood Victims." Gloucester Daily Times, January 9, 2018. https://www.gloucestertimes.com/news/local_news/woman-starts-drive-to-aid-car-flood-victims/article_ff0e192c-d32c-500b-958a-25348415247d.html.
Rayner, Steve. "Uncomfortable Knowledge: The Social Construction of Ignorance in Science and Environmental Policy Discourses: Strategic Unknowns: Towards a Sociology of Ignorance." *Economy and Society* 41, no. 1 (2012): 107–25.
Rosa González. "The Spectrum of Community Engagement to Ownership: Toolset for CCS Community Climate Shift." 2025.
Sampson, Robert. "What 'Community' Supplies." In *The Community Development Reader*. Accessed June 26, 2025. https://drive.google.com/drive/u/1/home.
Schlosberg, David, and Lisette B. Collins. "From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice." *WIREs Climate Change* 5, no. 3 (2014): 359–74. https://doi.org/10.1002/wcc.275.
Schweizer, Errol, and Robert Bullard. "Environmental Justice: An Interview with Robert Bullard." Accessed June 26, 2025. https://www.ejnet.org/ej/bullard.html.
Skelton, Renee, and Vernice Miller. "The Environmental Justice Movement," August 22, 2023. https://www.nrdc.org/stories/environmental-justice-movement.
"Steamboat Springs Winter Carnival." Accessed June 27, 2025. https://www.steamboatchamber.com/events/annual-events/steamboat-winter-carnival/.
Steele, Jordan R., Benjamin S. Rashford, Thomas K. Foulke, John A. Tanaka, and David T. Taylor. "Wolf (*Canis Lupus*) Predation Impacts on Livestock Production: Direct Effects, Indirect Effects, and Implications for Compensation Ratios." *Rangeland Ecology & Management* 66, no. 5 (September 1, 2013): 539–44. https://doi.org/10.2111/REM-D-13-00031.1.
Teizer, Jochen. "Real-Time Spatial Modeling to Detect and Track Resources on Construction Sites." ProQuest Dissertations & Theses, 2006. https://www.proquest.com/docview/304983845?pq-origsite=primo.
The Awesome Foundation. "The Awesome Foundation: Gloucester, MA." Accessed June 26, 2025. https://www.awesomefoundation.org/en/chapters/gloucester.
"The Changing Nature of The Visitor Economy in Gloucester Massachusetts," January 2019.
The Gillnetter. "About." Accessed June 26, 2025. https://thegillnetter.com/about/.
The Manchester Cricket. "Historic Flooding." The Manchester Cricket. Accessed June 26, 2025. https://www.thecricket.com/stories/historic-flooding,19704.

———. “Historic Flooding.” The Manchester Cricket. Accessed June 26, 2025. https://www.thecricket.com/stories/historic-flooding,19704.
The White House. “Protecting American Energy From State Overreach.” The White House, April 8, 2025. https://www.whitehouse.gov/presidential-actions/2025/04/protecting-american-energy-from-state-overreach/.
Tierney, Kathleen J. *Disasters: A Sociological Approach*. Cambridge, UK ; Medford, MA: Polity Press, 2019.
Walker, Jo. “Urban Heat Islands and a Climate of Inequities.” Accessed June 26, 2025. https://seas.umich.edu/news/urban-heat-islands-and-climate-inequities-0.
Will Bachman. “J.J. Bartlett, Fighting for Fishing Families.” Accessed June 23, 2025. https://92report.com/podcast/episode-107-j-j-bartlett-fighting-for-fishing-families/.
N.d.