

Preventing Disaster Through Corporate-Community Agreements

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INTRODUCTION

Superstorm Sandy and the COVID-19 pandemic are paradigmatic disasters, with natural phenomena causing sudden, widespread damage.¹ Yet some disasters are caused by human action (or inaction), like the explosion on the Deepwater Horizon oil platform, which killed eleven workers and released the equivalent of 4.9 million barrels of oil into the Gulf of Mexico.² Moreover, even natural forces have disastrous effects only because of human decisions—which are influenced by socioeconomic forces—such as low-income people living in flood-prone areas.³ Some disasters affect only a small group of people yet have catastrophic effects on them, such as when two Boeing 737 MAX aircraft crashed, killing everyone on board.⁴ Many disasters feature a combination of factors, such as when fires that destroyed an entire town in California resulted from poorly maintained power lines but were exacerbated by dry conditions.⁵

¹ E.g., Donovan Finn & John Travis Marshall, *Superstorm Sandy at Five: Lessons on Law as Catalyst and Obstacle to Long-Term Recovery Following Catastrophic Disasters*, 48 ENV'T L. REP. NEWS & ANALYSIS 10494, 10496–98 (2018) (describing Superstorm Sandy and its aftermath in New York and New Jersey); Lisa Grow et al., *Disaster Vulnerability*, 63 B.C. L. REV. 957, 959–60 (2022) (discussing the COVID-19 pandemic as a disaster).

² Thomas C. Galligan, Jr., *Death at Sea: A Sad Tale of Disaster, Injustice, and Unnecessary Risk*, 71 LA. L. REV. 787, 788–90 (2011); Keith H. Hirokawa, *Disasters and Ecosystem Services Deprivation: From Cuyahoga to the Deepwater Horizon*, 74 ALB. L. REV. 543, 544 (2010-2011).

³ Justin Pidot, *Deconstructing Disaster*, 2013 BYU L. REV. 213, 215–16 (2013) (arguing that natural disasters may be “precipitated by natural forces” but that human decisions like “where we locate and how we build our homes, businesses, and roads . . . play[] a leading role in transforming events into disasters”).

⁴ W. Bradley Wendel, *Technological Solutions to Human Error and How They Can Kill You: Understanding the Boeing 737 MAX Products Liability Litigation*, 84 J. AIR L. & COM. 379, 381–90 (2019).

⁵ Jonas J. Monast, *Precautionary Ratemaking*, 69 UCLA L. REV. 520, 523 (2022) (“The Camp Fire was a result of corporate neglect, a changing climate, population growth, aging infrastructure, and historic reliance on centralized power grids that depend upon high

The preceding examples suggest that many disasters share two features: business activities are their sole or contributing cause of harm, and some localities are more heavily affected than others.⁶ One consequence is that business operations, particularly in hazardous sectors like energy, chemicals, and waste disposal, can cause disasters that might subject a company to massive liability.⁷ Another consequence is that the price of disasters resulting from business operations is too often paid by those least able to afford it, such as low-income persons who lack the means to move to safer locations or to respond to disasters,⁸ minorities in formerly redlined areas who already

voltage transmission lines to deliver electricity to remote locations.”); MacKenzie Thurman, Note, *Fighting Fire with Fire-Hardened Homes: The Role of Electric Utilities in Residential Wildfire Mitigation*, 122 COLUM. L. REV. 1055, 1063–64 (2022) (describing how “a 100-year-old Pacific Gas and Electric Company (PG&E) transmission tower in rural Paradise, faulty electrical distribution lines, and climate conditions joined forces to spark the devastating Camp Fire.”).

⁶ Robert D. Bullard & Beverly Wright, *Disastrous Response to Natural and Man-Made Disasters: An Environmental Justice Analysis Twenty-Five Years After Warren County*, 26 UCLA J. ENV'T L. & POL'Y 217, 252 (2008) (“What many people call ‘natural’ disasters are, in fact, acts of social injustice perpetuated by government and business that affect the poor, people of color, disabled, elderly, homeless, transit dependent and non-drivers – groups least able to withstand such disasters.”); *What Is a Disaster?*, IFRC, <https://www.ifrc.org/our-work/disasters-climate-and-crises/what-disaster> [https://perma.cc/D5QM-RVH2] (last visited Dec. 20, 2023) (defining “disasters” as “serious disruptions to the functioning of a community that exceed its capacity to cope using its own resources.”) (emphasis added).

⁷ See, e.g., Robert L. Rabin, *Corporate Responsibility in Mass Disaster Cases*, 72 DEPAUL L. REV. 495, 497–503 (2022) (describing several business-caused disasters and how claims for recovery “feature daunting property damage and loss of life”); Sarah Kent, *BP’s Deepwater Horizon Bill Grows by \$1.7 Billion*, WALL ST. J. (Jan. 16, 2018, 11:42 AM), <https://www.wsj.com/articles/bp-to-book-1-7-billion-charge-for-deepwater-horizon-claims-1516091386> [https://perma.cc/ZH2J-RJVM] (estimating that BP had spent at least \$63 billion to settle with governments and private claimants for oil that leaked when its Deepwater Horizon oil rig in the Gulf of Mexico exploded); Ginger Adams Otis, *Hawaiian Electric to Settle Maui Wildfire Claims as Part of \$4 Billion Deal*, WALL ST. J. (Aug. 3, 2024, 10:32 AM), <https://www.wsj.com/business/hawaiian-electric-to-settle-maui-wildfire-claims-as-part-of-4b-deal-5c7d06f5> [https://perma.cc/6PGY-WRYK] (reporting on the financial distress to two electric utilities for wildfires linked with their equipment: Hawaiian Electric consulted with restructuring advisers and ultimately agreed to pay \$2 billion for claims arising from Maui wildfires, while Pacific Gas & Electric exited bankruptcy after agreeing to pay \$25 billion to compensate for California wildfires in 2017 and 2018).

⁸ Christopher Afgani, Comment, *Choosing Life over Liberty and Property: Environmental Justice in a World Ravaged by Climate Change*, 68 UCLA L. REV. 786, 796 (2021) (arguing that the lack of mobility in many communities of color leads to devastating effects “when rapid-onset events hit”); Eleanor Krause & Richard V. Reeves, *Hurricanes Hit the Poor the Hardest*, BROOKINGS (Sept. 18, 2017), <https://www.brookings.edu/blog/social-mobility-memos/2017/09/18/hurricanes-hit-the-poor-the-hardest/> [https://perma.cc/98ED-35AW] (writing that more persons with low incomes live in areas near hazardous

live daily with high levels of toxins from industrial activities and waste disposal,⁹ and laborers and communities who depend on the very jobs that expose them to dangerous chemicals and other pollutants.¹⁰

Accordingly, this Article surveys the scholarship on environmental justice, disaster law and justice, and corporate-community agreements to show how businesses can operate in ways that prevent (or at least minimize the potential for) disasters in at-risk communities. Several areas of scholarship address localities harmed by business-related disasters and potential legal solutions. Environmental justice brought attention to the unequal distribution of environmental hazards that resulted from business activities and the inadequacy of the law to provide redress, so activists called for participatory and corrective justice for minority and low-income communities to avert “environmental catastrophes.”¹¹ Disaster law and justice have identified specific populations as more vulnerable to disasters and recommended that the government devote additional attention and resources to disaster prevention and response to make those communities more resilient.¹² Contracts between corporations and

facilities and therefore are exposed to toxins following hurricanes. Furthermore, they are often un- or under-insured, and they cannot easily relocate).

⁹ E.g., Robert D. Bullard, *Introduction: Environmental Justice—Once a Footnote, Now a Headline*, 45 HARV. ENV'T L. REV. 243, 246–47 (2021) (explaining how historically redlined communities are at greater risk of flooding); Heather Kryczka et al., *New Steps Toward Environmental Justice: The California Coastal Act and Environmental Justice Near Ports*, 50 SW. L. REV. 463, 464–65 (2022) (describing how “[l]ow-income communities of color disproportionately bear the [economic and health] burden of living” near ports and freight corridors “due to the segregation that permeates in cities as a result of discriminatory lending, redlining, and land use decisions”).

¹⁰ See, e.g., Krista Harper & S. Ravi Rajan, *International Environmental Justice: Building the Natural Assets of the World's Poor*, in RECLAIMING NATURE: ENVIRONMENTAL JUSTICE AND ECOLOGICAL RESTORATION 327, 333 (James K. Boyce et al. eds., 2007) (writing that “[p]oor agricultural workers . . . face the worst health impacts of pesticide drift” and “that being poor, they are forced to take on the most hazardous jobs”); Brie D. Sherwin, *Regulating Coal Ash Waste in the Trump Era*, 37 STAN. ENV'T L.J. 75, 92–96 (2017) (describing the adverse environmental and health effects of mountaintop removal coal mining and coal ash waste on nearby communities, which have high poverty rates and depend on coal mining for employment).

¹¹ See, e.g., Frank D. LoMonte & Daniel Delgado, *The Importance of Accessible Government Data in Advancing Environmental Justice*, 47 WM. & MARY ENV'T L. & POL'Y REV. 827, 838, 840 (2023) (writing that working class communities, people of color, and immigrants are more likely to be affected by industrial operations, hazardous chemicals, and natural disasters).

¹² See, e.g., Daniel Farber, *Symposium Introduction: Navigating the Intersection of Environmental Law and Disaster Law*, 2011 BYU L. REV. 1783, 1786–87 (2011) (disaster law) [hereinafter Farber, *Navigating*]; Robert R.M. Verchick, *Disaster Justice: The*

communities, such as good neighbor agreements (GNAs) and community benefit agreements (CBAs), encourage proactive (and interactive) solutions that include safer operations.¹³

Despite the insight afforded by these perspectives, none by themselves provide a satisfactory legal approach to prevent business operations from causing disasters that affect at-risk communities. For example, the narrow, adversarial frame of the environmental justice movement does not encompass certain populations that are at risk from disasters, and it forecloses collaborative efforts with business owners.¹⁴ Disaster law and justice scholars focus on expanded governmental intervention as a solution even though the government is part of the problem—and despite these scholars' own calls for community resilience.¹⁵ Among the chief criticisms of corporate-community agreements is that marginalized communities lack leverage to negotiate effective and enforceable agreements.¹⁶

While some legal scholars have blended two of these strands,¹⁷ none have woven all three into a tapestry of interconnected threads that can support each other and provide a more vibrant picture, possibly leading to meaningful legal solutions. The first three Parts of this Article draw out relevant themes from each of the literatures. Part I covers environmental justice, including the distributive injustice of the location of hazardous facilities, the inability of governmental authorities to correct that injustice, the will to fight injustice as empowering communities, and the limitations of applying the environmental justice frame to disasters. Part II turns to disaster law and justice, including the disaster cycle, the importance of recognizing vulnerable persons and building resilient communities, and the limited focus on command-and-control solutions. Part III addresses the history and features of GNAs and CBAs; their benefits for communities and

Geography of Human Capability, 23 DUKE ENV'T L. & POL'Y F. 23, 24–26 (2012) (disaster justice).

¹³ See, e.g., Kristen van de Biezenbos, *Contracted Fracking*, 92 TUL. L. REV. 587, 614–19 (2018) [hereinafter van de Biezenbos, *Contracted*].

¹⁴ See *infra* Section I(D).

¹⁵ See *infra* Section II(C).

¹⁶ See *infra* Section III(C).

¹⁷ E.g., Seema Kakade, *A Contractual Relationship with Environmental Justice*, 73 AM. U. L. REV. 343, 349 (2023) (calling for environmental NGOs to create environmental transactional practice groups to negotiate corporate-community agreements on behalf of environmental justice communities); Clifford J. Villa, *Remaking Environmental Justice*, 66 LOY. L. REV. 469, 518–20 (2020) [hereinafter Villa, *Remaking*] (proposing a new definition of environmental justice that blends aspects of vulnerability theory and disaster justice).

businesses; and challenges that include negotiation, representation, enforceability, and leverage.

Part IV blends the three literatures. They all agree on the vulnerability of certain populations to disaster, the ineffectiveness of the government in responding to those communities, and the need for community empowerment to prevent harm. Part IV then addresses how the shortcomings of each literature in isolation can be offset by insights from the other literatures: Disaster justice shifts environmental justice's focus from marginalized communities to vulnerable ones while corporate-community agreements encourage collaborative solutions; environmental justice rejects the disaster literature's emphasis on command-and-control regulation while advocates of corporate-community agreements see GNAs and CBAs as a better option; and environmental justice responds to concerns about logistics and representation by viewing collective action as essential for community resilience and civic engagement. Part IV closes by combining one key takeaway from each literature: the environmental justice communities' will to fight, the need for governmental actors to be more responsive, and the potential for corporate-community agreements to involve communities in hazard prevention. Communities' willingness to fight—when backed by the receptiveness of permitting authorities and courts to their claims and contracts—provides the leverage to encourage companies to negotiate corporate-community agreements that can effectively minimize the risks of many disasters.

I

THEMES FROM ENVIRONMENTAL JUSTICE

This Part draws on the extensive environmental justice literature by commentators in law and other disciplines to highlight themes relevant to business operations and disasters. First, marginalized communities continue to be disproportionately exposed to environmental hazards created by business operations. Second, these communities distrust the government because it has acquiesced to—and even perpetuated—this distributive injustice. Third, the willingness to fight through grassroots activism, permit challenges, and creative litigation empowers communities. Fourth, this adversarial mindset creates a rigid frame that limits consideration of other vulnerable populations and stymies collaboration with business and industry.

A. Vulnerable Communities Endure a Disproportionate Burden from Hazardous Business Activities

The “central concern” of environmental justice is distributive injustice, the disproportionate exposure of some populations to environmental hazards.¹⁸ Those hazards frequently result from business activities like waste disposal, industrial operations, electricity generation, and resource extraction.¹⁹ While better-off communities have the financial means and political power to prevent the siting of facilities near them, racial minorities, Indigenous persons, and low-income households do not.²⁰ This leads to marginalized communities bearing a greater share of the adverse health and property consequences of hazardous business operations.²¹

In the 1980s and 1990s, claims of distributive injustice were backed by quantitative studies correlating Locally Undesirable Land Uses (LULUs), like waste and manufacturing facilities, with areas that have large minority and low-income populations.²² Unfortunately, more

¹⁸ DENNIS C. CORY & TAUHIDUR RAHMAN, ENVIRONMENTAL JUSTICE AND FEDERALISM 1 (2012); see Colin Crawford, *Access to Justice for Four Billion: Urban and Environmental Options and Challenges*, 26 N.Y.U. ENV'T L.J. 340, 382 (2018) (“The basic demand of the environmental justice movement . . . is to more fairly distribute—or, preferably, reduce in an equitable manner—the harms of industrial and military activities.”).

¹⁹ Daniel Faber, *A More “Productive” Environmental Justice Politics: Movement Alliances in Massachusetts for Clean Production and Regional Equity*, in ENVIRONMENTAL JUSTICE AND ENVIRONMENTALISM: THE SOCIAL JUSTICE CHALLENGE TO THE ENVIRONMENTAL MOVEMENT 135, 135 (Ronald Sandler & Phaedra C. Pezzullo eds., 2007) (writing that the environmental justice movement focused on “(1) higher concentrations of destructive mining operations, polluting industrial facilities and power plants; (2) greater presence of toxic waste sites and disposal/treatment facilities, including landfills, incinerators, and trash transfer stations; (3) severe occupational and residential health risks from pesticides, lead paint, radiation waste, and other dangerous substances . . .”).

²⁰ Jeff Todd, *Trade Treaties, Citizen Submissions, and Environmental Justice*, 44 ECOLOGY L.Q. 89, 95–96 (2017) (contrasting the success of “[w]hite and middle-class communities” to prevent “environmentally hazardous activities” with the inability of “politically weak” low-income, minority, and Native American communities to do so).

²¹ See, e.g., Maryum Jordan, *Reflections on Fighting Environmental Racism in St. John the Baptist Parish, Louisiana*, 57 HARV. C.R.-C.L. L. REV. 439, 446–48 (2022) (describing the corridor between Baton Rouge and New Orleans, which has over 150 plants and refineries, as “Cancer Alley” because there are “high cancer rates [that] disproportionately affect communities of color”); Bullard & Wright, *supra* note 6, at 226–27 (describing the contamination of groundwater in an African American community near a waste dump in Dickson County, Tennessee).

²² See Alice Kaswan, *Distributive Justice and the Environment*, 81 N.C. L. REV. 1031, 1070–76 (2003) (citations omitted) (surveying several quantitative studies and concluding that “the vast majority of the studies demonstrate some degree of inequity in the distribution of LULUs on the basis of race and/or income, with race being the more frequently relevant factor,” which “support[s] the ‘broad’ claim of distributive injustice”).

recent studies show that this is still the case, whether the disparity is because of race or income—or both.²³ Even if industries do not intend to target marginalized communities, the siting of hazardous operations nevertheless has an adverse and disproportionate impact on those communities.²⁴ For example, studies have shown firms locate to areas with higher percentages of minority and low-income residents for business reasons, such as those areas being zoned for industrial activity, having lower land prices and wages, having access to transportation, or being proximate to suppliers and other similar businesses.²⁵ Other times, the nature of the business activity dictates location, such as mining for uranium on Indian reservations.²⁶ The end result is the same, however, because the location of hazardous business operations is “spatially correlated” with demographic factors.²⁷

This unjust distribution means that low-income and minority communities are also at a higher risk from disasters caused by business activities.²⁸ For example, minorities and low-income persons live in

²³ Solomon Hsiang et al., *The Distribution of Environmental Damages*, 13 REV. ENV'T ECON. & POL'Y 83, 88–90 (2019) (citing, *inter alia*, Janet Currie, *Inequality at Birth: Some Causes and Consequences*, 101 AM. ECON. REV. 1 (2011); Lucas W. Davis, *The Effect of Power Plants on Local Housing Values and Rents*, 93 REV. ECON. & STAT. 1391 (2011)) (“A range of empirical papers that date back to the 1970s document that low-income individuals disproportionately live . . . closer to toxic facilities . . . , Superfund hazardous waste sites . . . , and/or power plants”); Yanelli Nunez et al., *An Environmental Justice Analysis of Air Pollution Emissions in the United States from 1970 to 2010*, 15 NATURE COMM'NS, Jan. 17, 2024, at 1, 2 (citations omitted) (“Several studies . . . have found racial/ethnic and socioeconomic disparities in the spatial distribution of industrial facilities, landfills, hazardous waste sites, gas and coal-fired power plants, roadways, and other pollution sources.”).

²⁴ DORCETA TAYLOR, TOXIC COMMUNITIES: ENVIRONMENTAL RACISM, INDUSTRIAL POLLUTION, AND RESIDENTIAL MOBILITY 33 (2014) (calling “[a]n early and oft-used explanation for exposure to environmental hazards . . . racial and class discrimination,” which can be “intended or unintended”).

²⁵ Ann Wolverton, *The Role of Demographic and Cost-Related Factors in Determining Where Plants Locate: A Tale of Two Texas Cities*, in THE POLITICAL ECONOMY OF ENVIRONMENTAL JUSTICE 199, 213–15 (H. Spencer Banzhaf ed., 2012).

²⁶ Barry E. Hill, *Environmental Justice and the Transition from Fossil Fuels to Renewable Energy*, 53 ENV'T L. REP. 10317, 10325–26 (2023) (describing heightened rates of cancer in Navajo land, a location for uranium mining).

²⁷ H. Spencer Banzhaf, *The Political Economy of Environmental Justice: An Introduction*, in THE POLITICAL ECONOMY OF ENVIRONMENTAL JUSTICE, *supra* note 25, at 1, 6; see Ann Wolverton, *Effects of Socio-Economic and Input-Related Factors on Polluting Plants' Location Decisions* 9 B.E. J. ECON. ANALYSIS & POL'Y 1, 5 (2009) (finding that income and race correlate with the existing sites of polluting facilities).

²⁸ Shannon M. Roesler, *Addressing Environmental Injustices: A Capability Approach to Rulemaking*, 114 W. VA. L. REV. 49, 57–58 (2011) (“Minority and poor communities are also disproportionately affected by the environmental harms caused by disasters, such as Hurricane Katrina and the recent Deepwater Horizon oil spill.”).

proximity to hazardous facilities that are also more prone to flooding, so these communities face an “acute crisis” when “weather events strike.”²⁹ Consider that flooding from two different hurricanes exposed low-income and minority communities to hazardous substances: Hurricane Harvey spread toxins from multiple Superfund sites, and Hurricane Florence spread coal ash from containment facilities owned by Duke Energy.³⁰ Disaster can also result without the intervention of natural forces, as in Richmond, California, a town with high unemployment and poverty rates that “hosts multiple brownfield and Superfund sites.”³¹ The facilities have experienced multiple accidents, including different explosions as well as the release of sulfur dioxide and trioxide at sites owned by Chevron, and an oleum spill at a site owned by General Chemical.³² Whether chemical releases in Texas, utility-caused wildfires in California, or accidents related to pipelines throughout the nation, disasters from business operations disproportionately affect marginalized communities.³³

B. Governmental Authorities Perpetuate Injustice

The environmental justice scholarship also reveals how regulators and other governmental authorities fail to ameliorate—and may even perpetuate—distributive injustice. The environmental justice movement has long maintained that marginalized communities receive less vigorous enforcement of environmental laws and have lower rates

²⁹ Andrea Giampetro-Meyer & Nancy Kubasek, *Harvey: Environmental Justice and Law*, 31 *FORDHAM ENV'T L. REV.* 37, 45 (2020).

³⁰ Brie Sherwin, *After the Storm: The Importance of Acknowledging Environmental Justice in Sustainable Development and Disaster Preparedness*, 29 *DUKE ENV'T L. & POL'Y F.* 273, 283–94 (2019).

³¹ Sarah E. Lashley, *Pursuing Justice for All: Collaborative Problem-Solving in the Environmental Justice Context*, 9 *ENV'T JUST.* 188, 192 (2016).

³² *Id.*

³³ Avi Zevin, *Regulating the Energy Transition: FERC and Cost-Benefit Analysis*, 45 *COLUM. J. ENV'T L.* 419, 508 (2020) (claiming that “pipelines may pose significant environmental justice concerns” because the “construction and operation of pipelines can put vulnerable and disadvantaged communities at greater risk of air pollution, water pollution, and safety consequences”); Will Scharffenberger, Note, *Environmental Justice Issues Surrounding California Wildfires*, 45 *ENVIRONS ENV'T L. & POL'Y J.* 261, 261, 264 (2022) (claiming that wildfires—including those caused by “infrastructure maintenance failures like downed electrical lines”—“have a greater impact on disadvantaged communities”); Liam Veazey, Note, *Chemical Disasters: An Urgent Environmental Justice Issue in Texas*, *TEX. ENV'T L.J.* 108, 117–18 (2022) (characterizing “accidental chemical releases and chemical disasters [as] environmental justice issues” because facilities “are often located near low-income communities and communities of color”).

of cleanup of contaminated sites than more affluent communities.³⁴ Quantitative studies have validated that concern and correlated lower regulatory enforcement with community characteristics like lower incomes and higher percentages of minorities.³⁵

These inequities persist despite efforts by federal and state governments. For example, President Clinton signed Executive Order 12898, which required federal agencies to consider environmental justice issues and established the Office of Civil Rights within the EPA to review complaints filed under Title VI of the Civil Rights Act of 1964.³⁶ Most states also have laws directing their agencies to address environmental justice.³⁷ Further, the EPA and many states have created environmental justice mapping tools like the Environmental Justice Screening and Mapping Tool (EJScreen) that identify high pollution loads in minority and low-income areas.³⁸ The law can incorporate environmental justice principles only “in partial and imperfect ways,” however.³⁹ Accordingly, while regulators like the EPA have “had some success in expanding the conversation, improving access to

³⁴ Faber, *supra* note 19 (calling one concern of environmental justice “lower rates of clean-up and environmental enforcement of existing laws”); see Idna G. Castellón, Comment, *Cancer Alley and the Fight Against Environmental Racism*, 32 VILL. ENV’T L.J. 15, 24 (2021) (claiming that “the EPA’s and state environmental agencies’ unequal enforcement of [environmental statutes] have actually perpetuated environmental racism in Cancer Alley and similar communities.”).

³⁵ See, e.g., Dietrich Earnhart, *The Effects of Community Characteristics on Polluter Compliance Levels*, 80 LAND ECON. 408 (2004) (finding that community characteristics like wealth, employment, and education affect regulation and performance); Logan Judy, *Liberty and Environmental Justice for All? An Empirical Approach to Environmental Racism*, 53 WAKE FOREST L. REV. 739, 741 (2018) (finding that “when controlling for various extraneous variables, congressional districts with higher minority populations receive less severe EPA oversight and regulation”); David M. Konisky, *Inequities in Enforcement? Environmental Justice and Government Performance*, 28 J. POL’Y ANALYSIS & MGMT. 102, 103 (2009) (finding less enforcement of federal environmental statutes in low-income neighborhoods).

³⁶ Uma Outka, *Fairness in the Low-Carbon Shift: Learning from Environmental Justice*, 82 BROOK. L. REV. 789, 795 (2017) (citing Exec. Order No. 12,898, 3 C.F.R. 859 (1994), 59 Fed. Reg. 7629 (Feb. 11, 1994)). The Biden administration has also made “equity and justice . . . the center of its environmental agenda.” Richard L. Revesz, *Air Pollution and Environmental Justice*, 49 ECOLOGY L.Q. 187, 191–92 (2022).

³⁷ Outka, *supra* note 36, at 796 (“[T]he majority of states have addressed EJ goals in some way by statute, regulation, or state program.”).

³⁸ Laura Grier et al., *Community Input on State Environmental Justice Screening Tools*, 52 ENV’T L. REP. 10441, 10441–42 (2022).

³⁹ Shannon M. Roesler, *Challenging What Appears “Natural”: The Environmental Justice Movement’s Impact on the Environmental Agenda*, in ENVIRONMENTAL LAW AND CONTRASTING IDEAS OF NATURE: A CONSTRUCTIVIST APPROACH 230, 238–39, 246 (Keith H. Hirokawa ed., 2014).

information, and forging new partnerships with communities,”⁴⁰ governmental efforts to address environmental injustice through new standards, targeted enforcement, and better permitting decisions have fallen short.⁴¹

One problem is that the “administrative processes through which much of environmental law is enforced too often subordinate the concerns and values of less powerful, and in many instances local, interests to those of more powerful interests.”⁴² Even with expanded outreach by regulators, critics contend that many local stakeholders cannot “participate effectively in notice-and-comment rulemaking.”⁴³ Marginalized communities face several barriers to participation, such as lower educational attainment, language difficulties, and job and transportation issues that make it challenging to attend administrative proceedings.⁴⁴ Further, they lack the resources to “raise issues with reasonable specificity” to challenge agency actions.⁴⁵ Moreover, marginalized communities lack certain participatory rights, such as in complaints challenging siting or use permits under Section 602 of Title VI: If the EPA dismisses the complaint, there is no right to appeal, and even if the EPA accepts the complaint, the complainants have no right

⁴⁰ Dorothy M. Daley & Tony G. Reames, *Public Participation and Environmental Justice: Access to Federal Decision Making*, in *FAILED PROMISES: EVALUATING THE FEDERAL GOVERNMENT’S RESPONSE TO ENVIRONMENTAL JUSTICE* 143, 158 (David M. Konisky ed., 2015).

⁴¹ See Alice Kaswan, *Environmental Justice and Environmental Law*, 24 *FORDHAM ENV’T L. REV.* 149, 156 (2013) (“EPA’s Office of Civil Rights . . . , the program responsible for enforcing Title VI, has been ineffective in enforcing the regulations.”); Jon A. Mueller & Taylor Lilley, *Forty Years of Environmental Justice: Where Is the Justice?*, 25 *RICH. PUB. INT. L. REV.* 75, 124 (2022) (writing that the EPA has made “little progress” in “developing standards, focusing enforcement, or making permitting decisions” that address environmental justice communities’ concerns).

⁴² Sheila Foster, *Environmental Justice in an Era of Devolved Collaboration*, 26 *HARV. ENV’T L. REV.* 459, 465 (2002).

⁴³ Jim Rossi & Kevin M. Stack, *Representative Rulemaking*, 109 *IOWA L. REV.* 1, 11 (2023) (claiming that local stakeholders cannot “participate effectively in notice-and-comment rulemaking”); Jonathan Skinner-Thompson, *Procedural Environmental Justice*, 97 *WASH. L. REV.* 399, 402 (2022) (arguing that achieving environmental justice for “marginalized communities . . . requires more than just extra process and more outreach.”).

⁴⁴ Daley & Reames, *supra* note 40, at 149–50; see also Mike Ewall, *Legal Tools for Environmental Equity vs. Environmental Justice*, 13 *SUSTAINABLE DEV. L. & POL’Y*, 4, 5 (2012).

⁴⁵ Skinner-Thompson, *supra* note 43, at 412–13 (“[P]rinciples of administrative law place the burden on the public to raise issues with reasonable specificity before they may challenge an agency action,” which leads to “less public participation.”).

to participate in proceedings and enforcement negotiations.⁴⁶ By contrast, businesses have both the incentives and the resources to shape environmental decision-making in their favor,⁴⁷ to the point that there is a danger of regulatory capture.⁴⁸

Another problem is the compatibility of regulatory objectives and decision-making with environmental justice concerns. For example, “regulatory tools and practices [are] built upon utilitarian principles of welfare economics,” so regulators tend to optimize choices that have the greatest good for the greatest number of people.⁴⁹ Environmental justice issues are local, however, with each community facing its own particular challenges;⁵⁰ accordingly, regulators concerned with regional issues might not effectively address local hot spots of environmental hazards.⁵¹ A “one size fits all approach” to regulation is therefore “unlikely to be efficient or effective” for tackling local and “unique” problems.⁵²

Nor are local authorities necessarily better at addressing community concerns. These authorities can be “so eager to stimulate local economic development that they fail to fully engage communities in the project review process,” which can “obscure a local government’s perception of the social and environmental needs of particular

⁴⁶ Sara A. Colangelo, *Forging Complete Justice: Equitable Relief in Environmental Enforcement*, 46 HARV. ENV’T L. REV. 315, 357 (2022) (“Affected communities tend to be restricted from participation in environmental enforcement negotiations between a violator and the federal government.”); *id.* (“Even when citizens learn that settlement negotiations are occurring, those meetings and their substance often lack transparency until the end of the process.”); Todd, *supra* note 20, at 108–09 (discussing Section 602 proceedings and their shortcomings, including the inability of complainants to appeal dismissal).

⁴⁷ Daley & Reames, *supra* note 40, at 147.

⁴⁸ Ruhan Nagra et al., *Regulatory Theater: How Investor-Owned Utilities and Captured Oversight Agencies Perpetuate Environmental Racism*, 25 CUNY L. REV. 355, 397–98 (2022) (quoting Telephone Interview with Lee Ziesche, Deputy Director of Communications and Media, Sane Energy Project (Jan. 23, 2022)) (arguing that regulators may be subject to regulatory capture and thus fail to enforce utilities’ obligations to conduct climate and environmental justice impact assessments).

⁴⁹ Foster, *supra* note 42, at 466.

⁵⁰ See Roesler, *supra* note 39, at 244 (“What is understood to be an ‘environmental’ problem will therefore differ from one community to another and will change over time”); see also Rossi & Stack, *supra* note 43 (“[M]any environmental justice issues are most salient at the local or neighborhood level . . .”).

⁵¹ George Wyeth, *A Framework for Community-Based Action on Air Quality*, 50 ENV’T L. REP. 10808, 10809 (2020); see David E. Adelman, *The Collective Origins of Toxic Air Pollution: Implications for Greenhouse Gas Trading and Toxic Hotspots*, 88 IND. L.J. 273, 300 (2013) (claiming that EPA data lack the resolution necessary to detect neighborhood-level hot spots).

⁵² Daley & Reames, *supra* note 40, at 143.

communities.”⁵³ The lack of local oversight can have catastrophic consequences, such as with the alleged failures of the state of Hawaii, Maui County, and the local school district to reduce the risk of wildfires before the deadly fire that destroyed Lahaina.⁵⁴

C. Community Empowerment to Fight Injustice

Each community faces a unique set of challenges,⁵⁵ so correcting environmental injustice necessitates local input to address what are local problems.⁵⁶ Unfortunately, environmental justice communities are less politically active than more affluent ones, which makes them targets for the siting of hazardous business operations and for lower enforcement of environmental laws.⁵⁷ To disrupt the status quo, communities must unite for collective action, which they do by drawing

⁵³ Patricia E. Salkin & Amy Lavine, *Community Benefits Agreements and Comprehensive Planning: Balancing Community Empowerment and the Police Power*, 18 J.L. & POL’Y 157, 157–58 (2009) [hereinafter Salkin & Lavine, *Community*].

⁵⁴ Dan Frosch & Christine Mai-Duc, *For Some Maui Fire Victims, \$1 Million Payments Are Too Little, Too Soon*, WALL ST. J. (Nov. 19, 2023, 10:00 AM), <https://www.wsj.com/us-news/some-see-maui-fire-victim-fund-as-too-little-too-soon-51e27c84> [<https://perma.cc/T8F6-3AQA>].

⁵⁵ See, e.g., Manuel Pastor, *Environmental Justice: Reflections from the United States*, in RECLAIMING NATURE: ENVIRONMENTAL JUSTICE AND ECOLOGICAL RESTORATION, *supra* note 10, at 351, 371 (claiming that the environmental justice movement is about “highly localized” and “particular community-based grievances”).

⁵⁶ E.g., Joshua C. Gellers & Trevor J. Cheatham, *Sustainable Development Goals and Environmental Justice: Realization Through Disaggregation?*, 36 WIS. INT’L L.J. 276, 282 (2019) (“[T]he elimination of environmental bads requires that affected groups have the ability to actively engage in environmental decision-making processes that determine how environmental bads and goods are distributed.”); Patrice L. Simms, *Leveraging Supplemental Environmental Projects: Toward an Integrated Strategy for Empowering Environmental Justice Communities*, 47 ENV’T L. REP. NEWS & ANALYSIS 10511, 10516 (2017) (“A central tenet of environmental justice . . . is that communities should speak for themselves and should play a direct and substantial role in identifying solutions to environmental (and other) problems.”).

⁵⁷ Daley & Reames, *supra* note 40, at 148–49 (writing that minority and low-income communities are less politically active and less likely to mobilize around environmental issues and that affluent community success in activism results in more siting and lower enforcement in marginalized communities); see, e.g., Ronald J. Shadbegian & Wayne B. Gray, *Spatial Patterns in Regulatory Enforcement: Local Tests of Environmental Justice*, in THE POLITICAL ECONOMY OF ENVIRONMENTAL JUSTICE, *supra* note 25, at 225, 226–27 (finding that “political activity significantly affects the amount of regulatory activity directed at a plant,” with those surrounded by politically active populations (voter turnout) and liberal (voted Democrat) receiving more attention); Paul Mohai & Robin Saha, *Which Came First, People or Pollution? Assessing the Disparate Siting and Post-Siting Demographic Change Hypotheses of Environmental Injustice*, 10 ENV’T RES. LETTERS 1, 1 (2015) (claiming that minority and low-income communities are targeted for hazardous waste facilities because they are less likely to put up resistance).

from the civil rights and antitoxics movements.⁵⁸ Creating the will to fight, including through judicial and administrative proceedings, unifies and empowers communities.⁵⁹

Building “a broad-based coalition” against polluters requires activists to “articulate a clear message so that they can . . . identify shared interests.”⁶⁰ Through confrontational tactics, such as marches and sit-ins, or legal processes, such as administrative proceedings and litigation,⁶¹ activists can articulate their message, generate publicity, and build community solidarity around the perception of a common threat.⁶² Communication and rhetorical scholarship affirms the ability of such confrontational tactics to establish community identity.⁶³ For example, one scholar writes that environmental activist rhetoric features a focus on sociopolitical conflict, polarization through us-versus-them framings, moral appeals to equity and social justice, and intense emotional appeals.⁶⁴ Framing an “environmental controversy” in these ways “encourages strong viewer affiliation with the victims of

⁵⁸ LUKE W. COLE & SHEILA R. FOSTER, FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT 20–23 (2001) (describing how the environmental justice movement borrowed tactics of the civil rights and antitoxics movements as ways to increase community power).

⁵⁹ See Mihaela Popescu & Oscar H. Gandy, Jr., *Whose Environmental Justice? Social Identity and Institutional Rationality*, 19 J. ENV'T L. & LITIG. 144, 146 (2004) (“The identity of this movement emerged gradually through interaction with the actors that contested it, such as the courts, the administrative agencies and the agents of harm.”).

⁶⁰ Todd, *supra* note 20, at 104; see Rebecca Bratspies, *Shutting Down Poletti: Human Rights Lessons from Environmental Victories*, 36 WIS. INT'L L.J. 247, 270 (2019) (claiming that “successful advocacy is bottom-up and must focus on demands that originate from, and resonate within, the affected community.”) (emphasis added).

⁶¹ Jeff Todd, *A “Sense of Equity” in Environmental Justice Litigation*, 44 HARV. ENV'T L. REV. 169, 177 (2020) [hereinafter Todd, “Sense of Equity”].

⁶² Popescu & Gandy, *supra* note 59, at 160–61 (“The perception of environmental threat increases the sense of solidarity among the residents of the affected areas.”).

⁶³ See, e.g., Matthew Ortoleva, *“We Face East”: The Narragansett Dawn and Ecocentric Discourses of Identity and Justice*, in ROUTLEDGE STUDIES IN RHETORIC AND COMMUNICATION: ENVIRONMENTAL RHETORIC AND ECOLOGIES OF PLACE 84, 84–86 (2013) (Peter N. Goggin ed., 2013) (writing that counterpublics emerge in response to exclusion and out of demand to speak one’s voice because “the public sphere is a space of conflict” that privileges the dominant group while locking out subordinate groups, so they establish an “ecological identity” through discourse); Hannah Schmid-Petri et al., *A Dynamic Perspective on Publics and Counterpublics: The Role of the Blogosphere in Pushing the Issue of Climate Change During the 2016 US Presidential Campaign*, 14 ENV'T COMMUN 378, 380 (2020) (writing that counterpublics emerge because of exclusion from dominant publics and that they “provide a space for the countermovement to develop a social identity”).

⁶⁴ Steven J. Schwarze et al., *Environmental Melodrama, Coal, and the Politics of Sustainable Energy in The Last Mountain*, 17 INT'L J. SUSTAINABLE DEV. 108, 111 (2014).

environmental degradation and injustice, and antipathy toward the perpetrators,” which then positions an audience for collective action.⁶⁵

While public protests fit with the environmental justice movement’s ethos of grassroots activism, building up and empowering communities through legal processes seems counterintuitive because these communities “distrust . . . the law.”⁶⁶ While all formal processes require an investment of time and expense,⁶⁷ litigation in particular presents numerous challenges: procedural obstacles like justiciability doctrines or dismissal because of the displacement of common law torts by federal statutes;⁶⁸ the ineffectiveness of federal statutes for providing relief;⁶⁹ and the shortcomings of torts, like proving causation where multiple facilities operate in a neighborhood or making the nuisance showing that local harms outweigh broader public benefits.⁷⁰ Sometimes, however, these communities win, particularly when they challenge the issuance of permits. One lawyer recounts multiple successes, including a board of supervisors reversing the City of San Francisco’s exemption of a rendering plant from environmental review and a court setting aside the City of Richmond’s approved expansion of a Chevron refinery.⁷¹ More recently, the Fourth Circuit overturned

⁶⁵ *Id.* at 110.

⁶⁶ COLE & FOSTER, *supra* note 58, at 33 (writing that low-income and working-class people “often have a distrust for the law and are often experienced in the use of nonlegal strategies, such as protest and other direct action”); *id.* at 12–13 (discussing the importance of understanding the environmental justice movement through “grassroots experiences”); Roesler, *supra* note 39, at 231 (“Calls for environmental justice today are shaped by a history of opposition to both law and mainstream environmentalism.”).

⁶⁷ Helen H. Kang, *Pursuing Environmental Justice: Obstacles and Opportunities—Lessons from the Field*, 31 WASH. U. J.L. & POL’Y 121, 138 (2009) (writing that “court cases require extensive investment of both time and money”); Jeremy Linden, Note, *At the Bus Depot: Can Administrative Complaints Help Stalled Environmental Justice Plaintiffs?*, 16 N.Y.U. ENV’T L.J. 170, 220 (2008) (calling costs a barrier to Section 602 actions with the EPA because affected communities need legal advice and expert studies to have enough information to file a complaint).

⁶⁸ Jeff Todd, *A Fighting Stance in Environmental Justice Litigation*, 50 ENV’T L. 557, 573–74 (2020) (writing that many environmental justice cases are dismissed because of justiciability doctrines and displacement).

⁶⁹ See, e.g., Catherine Millas Kaiman, *Environmental Justice and Community-Based Reparations*, 39 SEATTLE U. L. REV. 1327, 1340–50 (2016) (discussing the shortcomings of federal environmental statutes in the environmental justice context, including the inability to collect money damages under the Clean Air Act and Clean Water Act and the complexity of the Comprehensive Environmental Recovery, Compensation, and Liability Act).

⁷⁰ Todd, “*Sense of Equity*,” *supra* note 61, at 181–82.

⁷¹ Kang, *supra* note 67, at 130–32.

an air permit for a facility in a Black and Indigenous community.⁷² Then, an air board relied on that case in a six-to-one decision to deny a permit for a compressor station because of environmental health impacts.⁷³

Formal proceedings benefit communities in other ways. First, they help balance out power disparities by escalating a conflict, requiring corporate defendants to respond, and causing projects to be delayed and become more expensive.⁷⁴ The “uncertainty and risk” introduced by formal proceedings thus “provide the leverage to motivate defendants to settle.”⁷⁵ For example, in a predominantly Black neighborhood in West Dallas, residents challenged the renewal of a permit for an industrial waste and processing facility in court. The parties settled, and “the company agreed to decrease the number of gallons of hazardous waste that it would process, incorporate clean-up and disposal services, and hire a certain proportion of workers from the surrounding neighborhood.”⁷⁶ These settlements therefore empower the community to fashion its remedies and “lead to cessation of harmful conduct, remediation of hazardous areas, and greater participation in environmental decision making.”⁷⁷

Second, judicial and administrative proceedings help prevent future environmental injustice by providing activists the fora to change the

⁷² *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 86 (4th Cir. 2020).

⁷³ Mary Finley-Brook et al., *Racism and Toxic Burden in Rural Dixie*, 46 WM. & MARY ENV'T L. & POL'Y REV. 603, 676 (2022).

⁷⁴ Kang, *supra* note 67, at 136–37 (“Lawsuits force corporate decision makers to consider the merits and practicalities of their position at every stage of the case—from answering the complaint, to deciding whether to file motions to dismiss or for summary judgment, and eventually to devising positions for mandatory settlement conferences.”); Kyle W. La Londe, *Who Wants to Be an Environmental Justice Advocate?: Options for Bringing an Environmental Justice Complaint in the Wake of Alexander v. Sandoval*, 31 B.C. ENV'T AFFS. L. REV. 27, 48–49 (2004) (writing that NEPA lawsuits delay projects and drive up their costs); Gregg B. Walker, *The Transformative Potential of Environmental Melodrama and Its Conflict (Resolution) Implications*, 2 ENV'T COMM'N 85, 87 (2008) (writing that “polarizing discourse” can “escalate a conflict” and, “[i]n situations where power between the parties is significantly imbalanced, the low-power party may escalate the conflict in an effort toward power parity”).

⁷⁵ Todd, “*Sense of Equity*,” *supra* note 61, at 196; *see* Todd, *supra* note 20, at 111 (writing that both litigation and administrative proceedings can “force negotiation and possibly settlement.”).

⁷⁶ Gregg P. Macey & Lawrence E. Susskind, *The Secondary Effects of Environmental Justice Litigation: The Case of West Dallas Coalition for Environmental Justice v. EPA*, 20 VA. ENV'T L.J. 431, 465–66 (2001) (citing *Heat Energy Advanced Tech., Inc. v. W. Dallas Coal. for Env't Just.*, 962 S.W.2d 288, 290 (Tex. App. 1998)).

⁷⁷ Todd, *supra* note 20, at 107.

law.⁷⁸ For example, proceedings give decision-makers an opportunity to interpret (or reinterpret) statutes and regulations.⁷⁹ Activists also function as “norm entrepreneurs” by exposing the shortcomings of existing laws, arguing for creative applications of the law, and encouraging judges to expand the bounds of the common law.⁸⁰ Accordingly, environmental justice advocacy has already laid the groundwork for courts “to respond to what have previously been frustrating and intractable toxic and environmental harm cases,”⁸¹ including those related to disasters, as discussed more fully in Section IV(C), *infra*.

D. Narrow Conceptions and a Focus on Conflict Limit the Environmental Justice Frame

While adversarial framings draw attention to environmental injustice, bring affected communities together, and identify the agents of harm, they also create blinders. Defining communities narrowly by their “distinction and disunity” from other stakeholders⁸² excludes some populations vulnerable to disaster and stymies potentially beneficial efforts to collaborate with businesses.

The environmental justice movement seeks to direct attention to those who have suffered injustice because of inattention, particularly

⁷⁸ JACQUELINE PEEL & HARI M. OSOFSKY, CLIMATE CHANGE LITIGATION: REGULATORY PATHWAYS TO CLEANER ENERGY 30 (2015) (claiming that “activists us[e] lawsuits to try to influence the shape of the law and regulation”); see Stephen M. Johnson, *From Climate Change and Hurricanes to Ecological Nuisances: Common Law Remedies for Public Law Failures?*, 27 GA. ST. U. L. REV. 565, 599 (2011) (arguing that “common law actions could provide . . . communities with . . . a tool to prevent further harms”); see also Robert D. Bullard, *Leveling the Playing Field Through Environmental Justice*, 23 VT. L. REV. 453, 454 (1999) (writing that the ideal is “to prevent environmental threats before they occur”).

⁷⁹ See Kang, *supra* note 67, at 137 (calling lawsuits “necessary for statutory or regulatory interpretations”).

⁸⁰ Maria L. Banda, *The Bottom-Up Alternative: The Mitigation Potential of Private Climate Governance After the Paris Agreement*, 42 HARV. ENV'T L. REV. 325, 386–87 (2018); see also Douglas A. Kyser, *What Climate Change Can Do About Tort Law*, 41 ENV'T L. 1, 4 (2011) (arguing that forcing courts to confront complex issues can lead to “a reevaluation of the existing system for compensating and deterring harm” by shifting “the bar for exoticism in tort”).

⁸¹ Todd, “*Sense of Equity*,” *supra* note 61, at 200.

⁸² Jeff Todd, *The (De)Mystification of Environmental Injustice: A Dramatistic Analysis of Law*, 93 TEMP. L. REV. 597, 624 (2021) (“[T]he defining social factor for environmental justice communities is distinction and disunity from the majority, other classes, business and industry, and the government.”).

racial minorities and low-income persons.⁸³ Accordingly, expanding the scope of which populations' concerns raise environmental justice issues risks "obscur[ing] any focus on traditionally overburdened and underserved communities."⁸⁴ Yet maintaining a narrow framework is also problematic. For example, the "linguistic lumping together of 'low-income and minority communities' flattens the problem and hence remedial pathways."⁸⁵ The environmental justice framework "sideline[s] sovereignty- and self-determination-based Native American claims" and "tends to obscure U.S. territorial peoples' unique historical and political statuses, cultural practices, and distinct decolonization claims."⁸⁶ As one commentator observes, "being 'Hispanic' in Puerto Rico will not tell us about who survives the next hurricane."⁸⁷ Further, although rural communities are sometimes included within the ambit of environmental justice, it may not be their rural location that makes them marginalized.⁸⁸ Instead, it may be the fact that many of those are also low-income or minority communities.⁸⁹ Consider one hazard disproportionately affecting rural whites in higher-value homes: proximity to high-voltage power transmission lines.⁹⁰ Some may dismiss power lines as being less of a disamenity than the toxic waste facilities that overburden low-income and minority communities,⁹¹ but downed power lines have caused deadly fires, so

⁸³ Robert D. Bullard, *Environmental Racism and 'Invisible' Communities*, 96 W. VA. L. REV. 1037, 1046 (1994) (characterizing "urban ghettos, barrios, ethnic enclaves, rural 'poverty pockets,' and Native American reservations" as "invisible communities").

⁸⁴ Clifford J. Villa, *No "Box to Be Checked": Environmental Justice in Modern Legal Practice*, 30 N.Y.U. ENV'T L.J. 157, 168 (2022) [hereinafter Villa, *No Box*]; see Villa, *Remaking*, *supra* note 17, at 476–77 ("If there is such a thing as an *environmental justice community*, what does that look like?").

⁸⁵ Eric K. Yamamoto & Susan K. Serrano, *Foreword to the Republication of Racializing Environmental Justice*, 92 U. COLO. L. REV. 1383, 1387 (2021).

⁸⁶ Susan K. Serrano, *Reframing Environmental Justice at the Margins of U.S. Empire*, 57 HARV. C.R.-C. L. L. REV. 475, 480 (2022).

⁸⁷ Villa, *Remaking*, *supra* note 17, at 517.

⁸⁸ See Ann M. Eisenberg, *Distributive Justice and Rural America*, 61 B.C. L. REV. 189, 203–04 (2020) (focusing her article on distributive justice for rural communities to those chronically low-income and typically nonwhite, and those where populations and job opportunities are declining).

⁸⁹ *Id.*

⁹⁰ Daniel Wartenberg et al., *Environmental Justice: A Contrary Finding for the Case of High-Voltage Electric Power Transmission Lines*, 20 J. EXPOSURE SCI. & ENV'T EPIDEM. 237, 239 (2010).

⁹¹ R. Shea Diaz, Note, *Getting to the Root of Environmental Injustice: Evaluating Claims, Causes, and Solutions*, 29 GEO. ENV'T L. REV. 767, 773–74 (2017); see Eisenberg, *supra* note 88, at 204 ("Being rural is not as much of a concern for relatively affluent places like Aspen and Vail, Colorado.").

“[n]either race nor ethnicity may predict who escapes the next fire in northern California.”⁹²

Another issue facing the environmental justice movement is that community-business collaborations conflict with environmental justice at a conceptual level. Many community members may accept the risk of environmentally hazardous business operations because they create jobs and contribute to economic development.⁹³ Environmental justice activists, however, typically frame issues in absolute terms that portray businesses as villains.⁹⁴ Such polarizing, us-versus-them framings entrench an oppositional stance that leaves no room for compromise and collaboration with businesses,⁹⁵ a conclusion reinforced by scholars who limit their calls for collaboration to those between communities and governmental authorities.⁹⁶ Yet other scholars argue

⁹² Villa, *Remaking*, *supra* note 17, at 517; *see* Villa, *No Box*, *supra* note 84, at 168 (arguing that the focus for environmental justice should not be on classes of people “but upon the specific *characteristics* that make them most vulnerable to environmental harms”); *see also* Thurman, *supra* note 5 (describing how downed power lines contributed to California fires).

⁹³ Brigham Daniels et al., *Just Environmentalism*, 37 *YALE L. & POL’Y REV.* 1, 35 (2018) (recognizing that many residents of “vulnerable communities” might favor the blockage of “pollution-producing facilities in areas hungry for the jobs” but arguing that others may be “conflicted” or even in favor of the facility “for the sake of economic opportunities”); Popescu & Gandy, *supra* note 59, at 157 (recognizing that divergent views exist within a community when some residents favor an industrial facility because it provides employment while others with nearby homes oppose the facility); *see* Adam Creppelle, *Getting Smart About Tribal Commercial Law: How Smart Contracts Can Transform Tribal Economies*, 46 *DEL. J. CORP. L.* 469, 469–70 (2022) (writing that there is little economic development on tribal lands and that “[t]ribes have engaged in numerous reforms to attract businesses to their lands”).

⁹⁴ Steven Schwarze, *Environmental Melodrama*, 92 *Q.J. SPEECH* 239, 247 (2006) (writing that the “melodramatic depiction[s] of opposed socio-political forces [that] is pervasive in environmental controversy . . . arrays these forces using victim/villain and David/Goliath character types.”).

⁹⁵ Lisa A. Binder, *Religion, Race, and Rights: A Rhetorical Overview of Environmental Justice Disputes*, 6 *WIS. ENV’T L.J.* 1, 3 (1999) (arguing that “differing views” of siting disputes “likely impede[] compromise”); Shiv Ganesh & Heather M. Zoller, *Dialogue, Activism, and Democratic Social Change*, 22 *COMMUN THEORY* 66, 71 (2010) (writing that consensus and building relationships are “incompatible with many depictions of activism”); Schwarze, *supra* note 94, at 250 (claiming that the interpretation of “polarized, socio-political conflicts in moral terms . . . leads to moral wrongs, injustices that cannot be rectified through political compromises or minor adjustments in existing practices.”) (emphasis omitted).

⁹⁶ *See, e.g.*, Karen Bradshaw, *Stakeholder Collaboration as an Alternative to Cost-Benefit Analysis*, 2019 *BYU L. REV.* 655, 658 (2019) (“‘Collaborative analysis’ describes agencies’ use of groups of diverse non-agency stakeholders to develop policy recommendations.”) (emphasis added); Foster, *supra* note 42, at 473 (writing that collaboration works through a “multilateral relationship” with “central government decision-makers”).

that corporate-community agreements have the potential to correct environmental injustice⁹⁷ and to provide communities that are “frustrat[ed] with formal processes” a way to secure justice by engaging directly with businesses.⁹⁸ Looking for insight outside of environmental justice scholarship might demonstrate why and how collaboration can benefit these communities, so the next Parts turn to the scholarship on disaster law and justice and on corporate-community agreements.

II

DISASTER LAW AND DISASTER JUSTICE

Though disaster research began to develop after World War II, following military attacks on civilians, it was not until the aftermath of Hurricane Katrina, as the storm’s uneven impact became clear, that disaster law truly emerged as a legal academic field.⁹⁹ The hurricane, and governmental responses to it, revealed stark discrepancies in terms of exposure, vulnerability, and recovery among marginalized populations, including low-income individuals, Black people, women, elderly people, and individuals with disabilities.¹⁰⁰ Against that backdrop, scholars began conceptualizing the role of law in preventing, responding to, and managing natural disasters.¹⁰¹ By emphasizing the significance of demographic and geophysical factors in a community’s experience with catastrophic environmental events, scholars facilitated the emergence of a discourse around disaster justice.¹⁰² This Part sets

⁹⁷ Kakade, *supra* note 17, at 348–49 (recognizing that corporate-community agreements have great potential to target environmental injustice).

⁹⁸ Shelley Welton & Joel Eisen, *Clean Energy Justice: Charting an Emerging Agenda*, 43 HARV. ENV’T L. REV. 307, 359 (2019).

⁹⁹ See Daniel Farber, *Response and Recovery After Maria: Lessons for Disaster Law and Policy*, 87 REVISTA JURÍDICA U. P.R. 743, 743–44 (2018) [hereinafter Farber, *Response*]; Verchick, *supra* note 12, at 41.

¹⁰⁰ ROBERT R.M. VERCHICK, FACING CATASTROPHE 131, 136, 156 (2010); see also Bullard & Wright, *supra* note 6, at 241–51 (explaining inadequate government responses to Hurricane Katrina); see also Kelly McGee, Comment, *A Place Worth Protecting: Rethinking Cost-Benefit Analysis Under FEMA’s Flood-Mitigation Programs*, 88 U. CHI. L. REV. 1925, 1952–53 (2021) (describing racial disparities in the allocation of federal flood recovery grant programs).

¹⁰¹ Daniel A. Farber, *Introduction: Legal Scholarship, the Disaster Cycle, and the Fukushima Accident*, 23 DUKE ENV’T L. & POL’Y F. 1, 2 (2012).

¹⁰² Verchick, *supra* note 12, at 25; Sheila R. Foster, *Vulnerability, Equality and Environmental Justice: The Potential and Limits of Law*, in THE ROUTLEDGE HANDBOOK OF ENVIRONMENTAL JUSTICE 136, 1, 19 (Ryan Holifield et al. eds., 2017).

out the key tenets of disaster law and justice and then addresses their limited focus on top-down governmental solutions.

A. The Disaster Cycle: The Importance of Prevention, the Limits of Compensation

Though the phrase “natural disaster” may seemingly imply one type of event—a sudden emergency caused by nature without human influence—scholars appreciate the transformative effects human action and inaction have on the breadth and depth of impact.¹⁰³ Considering the extent to which humans can control, at least in part, the outcomes associated with such catastrophes, it follows that the “disaster cycle”¹⁰⁴—composed of mitigation, emergency response, victim compensation, and rebuilding—is central to disaster law.¹⁰⁵ Together, these interconnected processes and procedures that support disaster preparedness and recovery compose “society’s risk-management portfolio.”¹⁰⁶ Such a multifaceted strategy involves a continual back-and-forth shift between institutional, governmental, and private entities as these groups work to handle risk.¹⁰⁷ For example, governmental efforts to take precautions before a disaster by building robust infrastructure can help minimize harm to people and property, reduce the money private companies or governmental entities pay to compensate individuals for losses, and lower public and private recovery costs when rebuilding.¹⁰⁸ Then, the disaster cycle clarifies the

¹⁰³ Farber, *Navigating*, *supra* note 12, at 1788 (“Despite these blurry boundaries [of disaster law], however, the core cases are fairly clear. Hurricanes, floods, and earthquakes are clearly disasters, even before considering the importance of human factors that assist in determining the extent of harm.”); Pidot, *supra* note 3, at 215–16, 215 n.12 (quoting DANIEL A. FARBER ET AL., *DISASTER LAW AND POLICY* 3 (2d ed. 2010)) (“Most serious students of disaster have moved from defining a disaster as the hazardous event itself to defining a disaster in terms of the impact that the hazardous event has on people and property—an impact that is determined not only by the magnitude of the event, but also by human interaction with nature, by our choices about where and how we live.”).

¹⁰⁴ Farber, *Response*, *supra* note 99, at 746.

¹⁰⁵ Nancy J. Knauer, *U.S. Disaster Policy: Oversight Challenges and the Promise of Multi-Level Governance*, 26 *LEWIS & CLARK L. REV.* 973, 979–80 (2023).

¹⁰⁶ Farber, *Response*, *supra* note 99, at 747; Jim Chen, *Modern Disaster Theory: Evaluating Disaster Law as a Portfolio of Legal Rules*, 25 *EMORY INT’L L. REV.* 1121, 1122 (2011).

¹⁰⁷ Farber, *Navigating*, *supra* note 12, at 1791.

¹⁰⁸ See Farber, *Response*, *supra* note 99, at 743; see also Gerlinde Berger-Walliser & Paul Shrivastava, *Beyond Compliance: Sustainable Development, Business, and Proactive Law*, 46 *GEO. J. INT’L L.* 417, 469 (2015) (“Problem-prevention is crucial for environmental regulation because once an ecological disaster occurs, its effects are typically irreversible.

context within which public and private actors attempt to prepare for future events, react when incidents occur, pay for their inaction or mistakes, and work to restore communities.¹⁰⁹

Compensation for victims is essential to the disaster cycle and the field of disaster law; indeed, recovering and rebuilding depend on it.¹¹⁰ But the U.S. approach to post-disaster payments, which typically derives from “private insurance, government programs, or the tort system,” has drawbacks.¹¹¹ Private insurance is not always viable due to a lack of availability over high underwriting costs, contractual exclusions of catastrophic risks, and large numbers of claims.¹¹² Litigation against private parties responsible for environmental impacts also has significant shortcomings—namely, the requirement to prove liability, coverage limits of defendants, and other doctrines that limit awards.¹¹³ Government reimbursement can come from various sources—such as negligence claims against state or federal agencies, compensation programs for specific disasters, constitutional takings claims, or federal flood insurance claims.¹¹⁴ However, these reimbursements may be limited by potential immunity defenses for tort claims and the strict guidelines of funding programs established for certain events.¹¹⁵ Scholars have also suggested alternative approaches, including supplemental assistance for relocation, reconstruction, and education,¹¹⁶ as well as a new risk management tool, the catastrophe bond.¹¹⁷ Despite these potential paths to repayment, the United States’

Subsequent litigation can determine liability and remediate financial loss, but it cannot bring back human, animal, and plant life, or the beauty of nature.”)

¹⁰⁹ Farber, *Response*, *supra* note 99, at 747; Knauer, *supra* note 105, at 979.

¹¹⁰ *See* Farber, *Navigating*, *supra* note 12, at 1786.

¹¹¹ *See id.* at 1811 (quoting DANIEL A. FARBER & JIM CHEN, *DISASTERS AND THE LAW: KATRINA AND BEYOND* 161 (2006)); Shelley Ross Saxer, *Paying for Disasters*, 68 U. KAN. L. REV. 413, 413–18 (2020) (discussing shortcomings with various approaches to compensating victims of disasters and arguing that a combination of means that spread costs is necessary).

¹¹² Farber, *Navigating*, *supra* note 12, at 1811; Chen, *supra* note 106, at 1134–35.

¹¹³ *See* Farber, *Navigating*, *supra* note 12, at 1812.

¹¹⁴ *See id.*

¹¹⁵ *See id.*

¹¹⁶ Daniel A. Farber, *Disaster Law and Inequality*, 25 L. & INEQ. 297, 316–17 (2007) [hereinafter Farber, *Disaster*].

¹¹⁷ *See* Chen, *supra* note 106, at 1138 (“Like all other forms of alternative risk transfer, catastrophe bonds enable insurers to acquire risk-spreading capabilities beyond the traditional financial tools available to the insurance industry, namely, premiums and returns from investments on reserves built by those premiums. Catastrophe bonds transfer risks from the sponsoring insurer or reinsurer to investors willing to finance a contingent reserve

piecemeal approach to determining compensation for disaster victims lacks clarity for individuals, communities, and businesses.¹¹⁸

Recovering and rebuilding are critical to the disaster cycle and disaster law. While these processes can be complex and time-consuming, they also create a foundation on which the disaster cycle can begin again.¹¹⁹ As disaster law scholar Daniel Farber posited, “a crucial question about recovery is the extent to which steps will be taken to mitigate the harm that will be inflicted eventually by future disasters.”¹²⁰ Mitigation, then, is also at the heart of the recovery phase of the cycle.¹²¹ By centering prevention and readiness before an environmental occurrence, the field distinguishes and shapes itself by its dual emphases on vulnerability and resilience, which are discussed in the next Section.

B. Disaster Justice: From Vulnerable Communities to Resilient Communities

Disaster law scholar Robert Verchick has described a “natural disaster” as a “calamitous event that is triggered at least in part by a natural force—an earthquake, a flood, a hurricane, a drought.”¹²² While the label “natural disaster” describes catastrophic occurrences that are “precipitated by natural forces,” human behavior “plays a leading role in transforming events into disasters.”¹²³ Sometimes, this behavior is a cause of disasters, as is the case with industrial

in exchange for high returns on principal in the event the catastrophe never materializes.”); James Ming Chen, *Correlation, Coverage, and Catastrophe: The Contours of Financial Preparedness for Disaster*, 26 *FORDHAM ENV'T L. REV.* 56, 68–76 (2014).

¹¹⁸ Farber, *Navigating*, *supra* note 12, at 1812 (quoting Robert L. Rabin & Suzanne A. Bratis, *United States*, in 14 *TORT FLOOD INSURANCE LAW: FINANCIAL COMPENSATION FOR VICTIMS OF CATASTROPHES: A COMPARATIVE APPROACH* 303, 356 (2006) (“In the final analysis, the U.S. has what might well be termed a patchwork system for providing financial compensation for catastrophic loss Inevitably, in such a multifaceted milieu, where the tendency has been to develop discrete schemes in response to particularized categories of disasters (or rely on general welfare schemes that were enacted without disaster relief in mind), there will be ongoing fine-tuning of the system and a continuing dialogue over the efficacy of the measures in place.”)).

¹¹⁹ Farber, *Response*, *supra* note 99, at 748.

¹²⁰ *Id.*

¹²¹ *See id.*

¹²² Verchick, *supra* note 12, at 26. Another way to differentiate disasters is to distinguish between sudden-onset events like floods, tornadoes, earthquakes, and hurricanes, and slow-onset events like increases in temperature, the loss of biodiversity, and the degradation of forests. Afgani, *supra* note 8, at 790.

¹²³ Pidot, *supra* note 3, at 215.

accidents.¹²⁴ Human behavior also affects the results of a disaster, with human vulnerability hinging on geophysical, sociopolitical, and historical factors.¹²⁵ The notions of vulnerability, on the one hand, and resilience, on the other, have emerged as prominent features in discussions about inequality and justice in the context of disasters.¹²⁶

Scholars from various disciplines, including geography, sociology, feminist legal theory, urban planning, and law, have articulated definitions of vulnerability and resilience that contribute to understanding the complexities around preventing and recovering from disasters.¹²⁷ In the disaster law literatures, Professor Verchick differentiates physical vulnerability, which includes geology, hydrology, climate, and the built environment, from social vulnerability, which considers a community's susceptibility to the impacts of a disaster.¹²⁸ He describes "community hazard" as a combination of both.¹²⁹ Injustice arises when the government fails to build resilience and increases social vulnerability, which, in addition to race and class, includes demographic factors like age, disability, and

¹²⁴ Knauer, *supra* note 105, at 978.

¹²⁵ See Afgani, *supra* note 8, at 797–807 (discussing redlining and federal Indian policy as examples of climate-related vulnerabilities).

¹²⁶ See Susan L. Cutter et al., *The Geographies of Community Disaster Resilience*, 29 GLOB. ENV'T CHANGE 65, 66 (2014) (discussing how vulnerability and resilience are "separate but linked concepts" in the disaster literature).

¹²⁷ See, e.g., Susan L. Cutter et al., *A Place-Based Model for Understanding Community Resilience to Natural Disasters*, 18 GLOB. ENV'T CHANGE 598, 599 (2008). The author defines vulnerability as "the pre-event, inherent characteristics or qualities of social systems that create the potential for harm," explains that it is a "function of the exposure (who or what is at risk) and sensitivity of system (the degree to which people and places can be harmed)," and notes resilience measures how a "social system respond[s] and recover[s] from disasters and includes those inherent conditions that allow the system to absorb impacts and cope with an event, as well as post-event adaptive processes that facilitate the ability of the social system to re-organize, change, and learn in response to a threat." *Id.* Another scholar defines vulnerability as "the characteristic that positions us in relation to each other as human beings and also suggests a relationship of responsibility between state and individual" and states that "[t]he nature of human vulnerability forms the basis for a claim that the state must be more responsive to that vulnerability[, and fulfilling] that responsibility primarily through the establishment and support of societal institutions," while "the counterpoint to vulnerability is . . . the resilience that comes from having some means with which to address and confront misfortune." Martha Albertson Fineman, *The Vulnerable Subject and the Responsive State*, 60 EMORY L.J. 251, 255–56, 269 (2010) (emphasis omitted) [hereinafter Fineman, *Responsive*]. A third scholar posits that ("[r]esilience is the capacity of a system to withstand or adapt to disturbance while maintaining the same basic structures and functions.") Craig Anthony (Tony) Arnold, *Resilient Cities and Adaptive Law*, 50 IDAHO L. REV. 245, 245 (2014).

¹²⁸ Verchick, *supra* note 12, at 38.

¹²⁹ *Id.*

gender.¹³⁰ To fight injustice and foster resilience “requires identifying the places where social vulnerability exists and improving the real-life capabilities of all the people living there,”¹³¹ including through measures taken before disaster strikes.¹³²

On a practical level, tools to identify vulnerable communities already exist in the United States. Geographer and disaster researcher Susan Cutter developed the Social Vulnerability Index (SoVI) with colleagues at the University of South Carolina’s Hazards and Vulnerability Institute to illustrate place-based social vulnerability and disproportionate means to prepare for and react to disasters.¹³³ Using twenty-nine social and economic variables, this comparative tool creates a numeric score and a map that depicts low, medium, and high levels of vulnerability, while also including details about particular sources of vulnerability.¹³⁴ The Federal Emergency Management Agency (FEMA) has integrated SoVI into its Geospatial Framework, a spatial model shared with emergency managers during environmental events.¹³⁵ State and federal teams relied on SoVI during Hurricane

¹³⁰ *Id.* at 45 (noting how the elderly were at greater risk of injury during Hurricane Katrina due to an increase in health problems, lack of mobility, and fixed incomes); Kaswan, *supra* note 41, at 176 (“[R]esiliency to adverse impacts, whether flooding or heat waves, is closely tied to underlying social vulnerability, and such impacts cannot be addressed without attention to underlying vulnerabilities.”); Jonathan P. Hooks & Trisha B. Miller, *The Continuing Storm: How Disaster Recovery Excludes Those Most in Need*, 43 CAL. W. L. REV. 21, 25 (2006) (arguing that “FEMA fail[ed] to consider the impact of policies that exclude those most in need”); Grow et al., *supra* note 1, at 959 (discussing “how disasters make already-vulnerable groups even more vulnerable” due to such harms as “political neglect, stigmatization, disenfranchisement, and displacement.”).

¹³¹ Verchick, *supra* note 12, at 67 (emphasis omitted); see Markus Keck & Patrick Sakdapolrak, *What Is Social Resilience? Lessons Learned and Ways Forward*, 67 ERKUNDE 5, 8 (2013) (Ger.) (defining social resilience as concerning the “abilities or capacities” of social entities, like communities, “to tolerate, absorb, cope with and adjust to environmental and social threats of various kinds,” including disasters).

¹³² Donald T. Hornstein, *Public Investment in Climate Resiliency: Lesson from the Law and Economics of Natural Disasters*, 49 ECOLOGY L.Q. 137, 147 (2022) (“[R]esiliency is more than simply the ability to bounce back and depends increasingly on measures taken before disaster strikes.”).

¹³³ Susan L. Cutter et al., *Social Vulnerability to Environmental Hazards*, 84 SOC. SCI. Q. 262 *passim* (2003); Erik Wood et al., *The Practical Use of Social Vulnerability Indicators in Disaster Management*, 63 INT’L J. DISASTER RISK REDUCTION 1, 5 (2021); Susan Cutter & Christopher Emrich, *Helping Those Most in Need First: Leveraging Social Vulnerability Research for Equitable Disaster Recovery*, NAT. HAZARDS CTR.: RSCH. COUNTS (Nov. 13, 2017), <https://hazards.colorado.edu/news/research-counts/helping-those-most-in-need-first-leveraging-social-vulnerability-research-for-equitable-disaster-recovery> [https://perma.cc/QLY7-HV5W].

¹³⁴ Cutter & Emrich, *supra* note 133.

¹³⁵ *Id.*

Matthew in Florida and South Carolina, Hurricane Harvey in Texas, and floods in Louisiana and West Virginia, illustrating its feasibility in actual crises.¹³⁶ Another Social Vulnerability Index, the SVI, is a free, publicly available program maintained by a unit of the Centers for Disease Control and Prevention: the Agency for Toxic Substances and Disease Registry's Geospatial Research, Analysis & Services Program (GRASP).¹³⁷ It employs sixteen U.S. census variables to assist local governments in identifying communities that may need support to prevent, respond to, or recover from disasters.¹³⁸ State and local governments, as well as private organizations, have reported using the SVI in their disaster planning,¹³⁹ and researchers have lauded the index's interpretability and ease of use.¹⁴⁰

*C. The Emphasis on Top-Down Solutions Limits Disaster Law
and Justice*

Scholars and practitioners of disaster law and justice have made valuable contributions to the field, particularly in their emphasis on defining vulnerabilities based on diverse demographic characteristics;¹⁴¹ developing specific tools to recognize and map those vulnerabilities;¹⁴² and employing the data from those tools to reduce risk, prevent crises, and ultimately build more resilient communities.¹⁴³ The field continues to grow, with universities dedicating institutes to preventing

¹³⁶ *Id.*

¹³⁷ *Social Vulnerability Index*, ATSDR (July 22, 2024), https://www.atsdr.cdc.gov/place-health/php/svi?CDC_AAref_Val [<https://perma.cc/MSE6-5HTV>].

¹³⁸ *Id.*

¹³⁹ Barry E. Flanagan et al., *Measuring Community Vulnerability to Natural and Anthropogenic Hazards: The Centers for Disease Control and Prevention's Social Vulnerability Index*, 80 J. ENV'T HEALTH 34, 34–36 (2018) (indicating use of the SVI database to determine social vulnerability and physical hazards like flooding, sea level rise, volcanic risk, and house fires).

¹⁴⁰ Daniel P. Johnson & Claudio Owusu, *Examining Associations Between Social Vulnerability Indices and COVID-19 Incidence and Mortality with Spatial-Temporal Bayesian Modeling*, 48 SPATIAL & SPATIO-TEMPORAL EPIDEM. 1, 4 (2024) (explaining the benefit of the consistent weight contribution among variables in each domain as compared to the more complex statistical approach of SoVI).

¹⁴¹ Verchick, *supra* note 12, at 38.

¹⁴² *E.g.*, SOVI, UNIV. S.C., https://sc.edu/study/colleges_schools/artsandsciences/centers_and_institutes/hvri/data_and_resources/sovi/ [<https://perma.cc/L366-W2GF>] (last visited Oct. 18, 2024).

¹⁴³ *See* Flanagan et al., *supra* note 139, at 34–36; Cutter & Emrich, *supra* note 133.

and managing disasters,¹⁴⁴ and nonprofit organizations crafting and advocating for more equitable and inclusive strategies for emergency response and recovery.¹⁴⁵ These advances are building on a solid foundation of scholarship and practice.

Scholars and policymakers, however, have also made missteps, most notably by focusing on top-down solutions despite their recognition that the government has failed to protect vulnerable communities from disaster¹⁴⁶ and their calls to make communities more resilient by including them in decision-making.¹⁴⁷ For example, prominent legal theorist Martha Albertson Fineman advocates for the state to be more responsive in identifying vulnerability and building resilience,¹⁴⁸ including human exposure to disaster, either natural or human-made, like “pollution or chemical spills.”¹⁴⁹ She writes that decreasing vulnerability and increasing resilience requires reorienting political culture and legal institutions toward addressing inequality.¹⁵⁰ For Fineman, “the mandate to be more responsive to and reflective of vulnerability” rests primarily with the legislative and executive branches.¹⁵¹ Courts then monitor whether these branches have fulfilled their role “in assessing individual equality claims.”¹⁵² Other scholars likewise envision a more robust role for the government. Some argue that building resilient communities requires “a united regulatory and

¹⁴⁴ See NAT. HAZARDS CTR., *Hazards and Disaster Research Centers in the Americas*, UNIV. COLO. BOULDER, <https://hazards.colorado.edu/resources/research-centers/americas> [<https://perma.cc/BDC4-ZRME>] (last visited Oct. 18, 2024).

¹⁴⁵ *In the Eye of the Storm: A People's Guide to Transforming Crisis & Advancing Equity in the Disaster Continuum*, NAACP, <https://naacp.org/resources/eye-storm-peoples-guide-transforming-crisis-advancing-equity-disaster-continuum> [<https://perma.cc/L7DK-S5EG>] (last visited Oct. 18, 2024).

¹⁴⁶ See Haley Palfreyman Jankowski, *Legal Barriers and Disincentives to Self-Sufficient Disaster Preparation in the United States*, 46 HOFSTRA L. REV. 563, 569–93 (2017) (discussing legal barriers to self-sufficient disaster preparation).

¹⁴⁷ See Lara Hamdanieh et al., *Social Justice: The Unseen Key Pillar in Disaster Risk Management*, 101 INT'L J. DISASTER RISK REDUCTION, Dec. 29, 2023, at 1, 2; Jennifer Horney et al., *Measuring Participation by Socially Vulnerable Groups in Hazard Mitigation Planning, Bertie County, North Carolina*, 58 J. ENV'T PLANNING & MGMT. 802, 816 (2015) (suggesting that more education and engagement opportunities will increase participation and awareness of hazard mitigation plans).

¹⁴⁸ Martha Albertson Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 YALE J.L. & FEMINISM 1, 20 (2008) [hereinafter Fineman, *Anchoring*].

¹⁴⁹ Fineman, *Responsive*, *supra* note 127, at 267.

¹⁵⁰ Fineman, *Anchoring*, *supra* note 148.

¹⁵¹ *Id.*

¹⁵² *Id.*

social welfare state,”¹⁵³ or they propose an executive order, similar to President Clinton’s on environmental justice, requiring federal agencies to consider disaster justice in their policies and activities.¹⁵⁴ Although these ideas may be useful, building resilience necessitates “bottom-up organizing and power,” not merely throwing more governmental rules and resources at the problem.¹⁵⁵

Top-down screening tools are similarly deficient. SVI and SoVI’s dependence on U.S. census data alone means that these indices are not completely accurate, fail to capture and report on rapid population changes (including temporary relocations due to the destruction and creation of housing developments, and increases due to the creation of new suburban subdivisions),¹⁵⁶ and do not count people in nonresidential spaces.¹⁵⁷ Though the programs have improved with the Census Bureau’s full implementation of the American Community Survey, which collects annual data on housing, socioeconomic status, and population, publication delays still exist.¹⁵⁸ Along with limitations relating to census information, SoVI’s shortcomings include a complex statistical framework that can lead to difficulties interpreting data,¹⁵⁹

¹⁵³ Sidney A. Shapiro & Robert R.M. Verchick, *Inequality, Social Resilience, and the Green Economy*, 86 UMKC L. REV. 963, 963–64 (2018).

¹⁵⁴ Verchick, *supra* note 12, at 68; *see, e.g.*, Kara Consalo, *Vulnerable Populations: Climate Change and Extreme Weather Threats Facing Urban Communities*, 11 CHI.-KENT J. ENV’T & ENERGY L. 1, 2 (2022) (explaining how urban policymakers can initiate and fund “climate resilience and mitigation tools” for extreme weather events); Grow et al., *supra* note 1, at 961 (urging “a sustained, data-driven, systemic approach to vulnerability” to “provide policy-makers with the ‘maps and numbers’ they need”); Sharona Hoffman, *Preparing for Disaster: Protecting the Most Vulnerable in Emergencies*, 42 U.C. DAVIS L. REV. 1491, 1497 (2009) (arguing that laws should mandate that government officials account for a wider range of vulnerable persons as part of disaster planning).

¹⁵⁵ Craig Anthony (Tony) Arnold et al., *Resilience Justice and Community-Based Green and Blue Infrastructure*, 45 WM. & MARY ENV’T L. & POL’Y REV. 665, 670 (2021) (“Government resources and authority are needed but should be integrated with bottom-up organizing and power.”); *see* Keck & Sakdapolrak, *supra* note 131, at 11 (calling one aspect of resilience “transformative capacities,” which are the ability of people “to participate in decision-making processes[] and to craft institutions that both improve their individual welfare and foster societal robustness toward future crises”).

¹⁵⁶ *See* Barry E. Flanagan et al., *A Social Vulnerability Index for Disaster Management*, 8 J. HOMELAND SEC. & EMERGENCY MGMT. 1, 15–16 (2011).

¹⁵⁷ *See id.* at 16 (indicating a plan to reduce this gap by including the locations of vulnerable facilities, like schools and hospitals, into the SVI toolkit).

¹⁵⁸ *See American Community Survey (ACS)*, U.S. CENSUS BUR., <https://www.census.gov/programs-surveys/acs> [<https://perma.cc/SBC6-KGEV>] (last visited Feb. 26, 2024); *SVI Frequently Asked Questions (FAQ)*, ATSDR, <https://www.atsdr.cdc.gov/place-health/php/svi/svi-frequently-asked-questions-faqs.html> [<https://perma.cc/544C-5AD6>] (last visited Feb. 26, 2024).

¹⁵⁹ Johnson & Owusu, *supra* note 140.

a steep learning curve among emergency personnel,¹⁶⁰ and inaccessibility—the tool is not freely available, so users must pay a fee to use it.¹⁶¹ Although its creators have shown that an evidence-based strategy could lead to more equitable processes in times of crisis, the index is not accessible to everyone, restricting SoVI's potential reach.¹⁶²

Moreover, Daniel Farber has noted that “natural disasters can offer society a pedagogical moment by making what is normally an invisible state of deprivation suddenly visible and salient.”¹⁶³ While the field of disaster law and justice recognizes the multilayered vulnerabilities that emerge before, during, and after disasters, this arena needs a more holistic approach to effect real change. Such a strategy may come from corporate-community agreements, which is discussed in the following Part.

III

CORPORATE-COMMUNITY AGREEMENTS AS A POTENTIAL SOLUTION

Contractual agreements between developers or other business operations and affected parties could ameliorate many problems addressed in Parts I and II, *supra*. This Part will first provide context for the emergence of GNAs and CBAs as private law approaches to regulating industrial facilities and new developments. The next Section then discusses the benefits of these agreements, particularly their potential to involve communities in facility operations and accident prevention. The final Section addresses the drawbacks disadvantaged communities face with corporate-community agreements, such as logistical challenges, inadequate representation, consideration and enforceability issues, and the lack of community leverage to negotiate effective agreements.

A. GNAs and CBAs: Private Law Approaches to Land Use Regulation

Communities have both nonlegal and legal options for addressing development and other business operations that affect them. Nonlegal community responses include citizen and community groups testifying at land use hearings, lobbying elected officials, disseminating

¹⁶⁰ Cutter & Emrich, *supra* note 133.

¹⁶¹ See Johnson & Owusu, *supra* note 140, at 3.

¹⁶² See *id.*; Cutter & Emrich, *supra* note 133.

¹⁶³ Farber, *Disaster*, *supra* note 116, at 320.

information, and participating in boycotts.¹⁶⁴ For example, Our Communities Oppose Rivian Assembly Plant has employed most of those methods. That citizens' activist group seeks to protect natural resources and surrounding farmland from a planned electric vehicle manufacturing site in rural Georgia.¹⁶⁵ Additionally, legal mechanisms to respond to development include zoning challenges, tort lawsuits, and environmental citizen suits.¹⁶⁶ As discussed in Section I(C), *supra*, legal approaches are often inadequate because they favor more affluent neighborhoods with the resources and time to use litigation strategies designed to delay or halt projects.

Corporate-community agreements provide a third option of private-law regulation through contracts. Scholars have attempted to distinguish between these types of agreements, such as describing GNAs as targeted primarily at avoiding harm and CBAs as carving out local benefits.¹⁶⁷ These functions bleed together in practice, however, so precise labels are less important than what GNAs and CBAs have in common.¹⁶⁸ Both private legal agreements, akin to homeowner agreements, contractually bind the signees.¹⁶⁹ The parties to the agreements are usually developers or other business operations and

¹⁶⁴ See Sanford Lewis & Diane Henkels, *Good Neighbor Agreements: A Tool for Environmental and Social Justice*, 23 SOC. JUST. 134, 137–138 (1996).

¹⁶⁵ Amanda Andrews, *Rutledge vs. Rivian: Morgan County Residents Fight Development of Massive Manufacturing Plant*, GPB (Feb. 10, 2022), <https://www.gpb.org/news/2022/02/10/rutledge-vs-rivian-morgan-county-residents-fight-development-of-massive> [<https://perma.cc/JP34-MPH5>].

¹⁶⁶ Vicki Been, *Community Benefits Agreements: A New Local Tool Government or Another Variation on the Exactions Theme?*, 77 U. CHI. L. REV. 5, 6 (2010) (“Conditional rezonings, development agreements, negotiated exactions, conditional negative declarations in environmental impact review, and compensated siting agreements between industries needing to develop locally undesirable land uses (LULUs) and host communities have been used for decades.”).

¹⁶⁷ See Salkin & Lavine, *Community*, *supra* note 53, at 179–83.

¹⁶⁸ For example, one commentator identifies fourteen items typically listed in a GNA as including provisions for pollution prevention and emergency response as well as benefits like “employment opportunities and job training for residents.” Michael Baram, *A New Social Contract for Governing Industrial Risk in the Community*, 56 JURIMETRICS 223, 236–37 (2016). Accordingly, this Article follows the lead of Seema Kakade, who refers to GNAs and CBAs collectively as “corporate-community agreements.” Kakade, *supra* note 17.

¹⁶⁹ Thalia González & Giovanni Saarman, *Regulating Pollutants, Negative Externalities, and Good Neighbor Agreements: Who Bears the Burden of Protecting Communities?*, 41 ECOLOGY L.Q. 37, 40, 62–63, 62 n.216 (2014) (noting that CBAs are legally enforceable private contracts and GNAs are legally binding agreements).

nearby community groups,¹⁷⁰ which may include local homeowners, labor organizations, religious organizations, Indigenous groups, and civic organizations like environmental and consumer rights advocacy groups.¹⁷¹ Because the contractual private agreement requires consideration, the business typically promises benefits to the community, such as affordable housing, commitments to hire locally, and environmental concessions.¹⁷² In turn, the community promises benefits to the business, such as project support¹⁷³ and assurances not to bring legal action.¹⁷⁴

GNAs emerged in the late 1970s as a tool “to foster sustainable development in a community by reconciling economic development with the community’s welfare, including the health of its environment and its individual members.”¹⁷⁵ While CBAs are typically linked with new development,¹⁷⁶ GNAs often target operations at existing industrial facilities like mines, chemical plants, and large-scale agricultural operations.¹⁷⁷ They seek to mitigate current harm and prevent future incidents.¹⁷⁸ For example, after a Rhone Poulenc plant

¹⁷⁰ Alejandro E. Camacho, *Community Benefits Agreements: A Symptom, Not the Antidote, of Bilateral Land Use Regulation*, 78 BROOK. L. REV. 355, 356 (2013); Steven P. Frank, Note, *Yes in My Backyard: Developers, Government and Communities Working Together Through Development Agreements and Community Benefit Agreements*, 42 IND. L. REV. 227, 247 (2009).

¹⁷¹ Patricia E. Salkin & Amy Lavine, *Understanding Community Benefits Agreements: Equitable Development, Social Justice and Other Considerations for Developers, Municipalities and Community Organizations*, 26 UCLA J. ENV’T L. & POL’Y 291, 294 (2008) [hereinafter Salkin & Lavine, *Understanding*] (“Negotiations for a CBA usually take place between the project developer and a coalition of community groups, which may include labor, environmental, civic, and religious organizations.”).

¹⁷² See Lisa Berglund, *Early Lessons from Detroit’s Community Benefits Ordinance*, 87 J. AM. PLAN. ASS’N 254, 255 (2021) (listing benefits that include “local hiring, affordable housing, promises to regulate environmental impacts, or the provision of assets like community centers, daycare, and public spaces”).

¹⁷³ Camacho, *supra* note 170, at 361.

¹⁷⁴ Salkin & Lavine, *Understanding*, *supra* note 171, at 325.

¹⁷⁵ Lewis & Henkels, *supra* note 164, at 138.

¹⁷⁶ See Charlotte Clarke, *Community Benefits Agreements: To the Extent Possible*, 6 U. BALT. J. LAND & DEV. 33, 33 (2016) (defining a CBA as “a contract or agreement between a developer and a community group or community coalition in the area a developer *plans to build*.”) (emphasis added).

¹⁷⁷ Salkin & Lavine, *Community*, *supra* note 53, at 182 (writing that GNAs “typically focus on the complex technical mitigation solutions required by heavy industrial facilities such as oil refineries, mines, chemical plants, foundries, and large-scale agricultural operations.”).

¹⁷⁸ Janet V. Siegel, *Negotiating for Environmental Justice: Turning Polluters into “Good Neighbors” Through Collaborative Bargaining*, 10 N.Y.U. ENV’T L.J. 147, 171–72

released sulfur dioxide in Manchester, Texas, in 1992, an environmental group secured a GNA for the affected community with terms that included an environmental audit and a supervisory panel selected by the community.¹⁷⁹

Moreover, CBAs have their genesis in concerns that regulators give insufficient protection to minority and low-income residents when large-scale real estate projects threaten to displace them and change a community's character.¹⁸⁰ Rather than be "overlooked or displaced" by gentrification, these communities can benefit from development through CBAs.¹⁸¹ These contracts "set[] forth a range of community benefits regarding a development project" and result from "substantial community involvement."¹⁸² For example, developers of the Staples Center in Los Angeles and a coalition of twenty-nine community groups and five labor unions negotiated the first CBA in 1991; the developers promised funding for a park, "reasonable efforts to maintain . . . permanent jobs," affordable housing, and parking programs.¹⁸³ Another example is New York's first CBA in 2005; community groups negotiated with the developers of the Atlantic Yards Arena (which became the home of the NBA's Brooklyn Nets) for provisions including union jobs and affordable housing.¹⁸⁴ CBAs gained momentum in the last decade, particularly with large-scale developments.¹⁸⁵ Those developments likely increased the use of

(2002) (defining a GNA as "a legally binding agreement negotiated by stakeholders and industry in which the violating industry agrees to reduce or eliminate pollution risks to the surrounding community"); Kristen van de Biezenbos, *Enforcing Private Environmental Governance Standards Through Community Contracts*, 9 GEO. WASH. J. ENERGY & ENV'T L. 45, 47 (2018) [hereinafter van de Biezenbos, *Enforcing*] (writing that GNAs use "direct negotiation and bargaining in order to mitigate damage and prevent future incidents.").

¹⁷⁹ Lewis & Henkels, *supra* note 164, at 143.

¹⁸⁰ van de Biezenbos, *Enforcing*, *supra* note 178; see Salkin & Lavine, *Community*, *supra* note 53, at 178 (writing that CBAs "have drawn attention to the fact that the planning and development review process often fails to address the needs of historically disempowered low income, minority, and non-English speaking communities").

¹⁸¹ Salkin & Lavine, *Understanding*, *supra* note 171, at 298.

¹⁸² Julian Gross, *Community Benefits Agreements: Definitions, Values, and Legal Enforceability*, 17 J. AFFORD. HOUS. & CMTY. DEV. L. 35, 37 (2007/2008).

¹⁸³ Been, *supra* note 166, at 6–9. Another California project, the new venue for the Academy Awards, yielded the Hollywood and Highland CBA in 1998. See Hannah P. Stephan, *Contracting with Communities: An Analysis of the Enforceability of Community Benefits Agreements*, 40 MINN. J.L. & INEQ. 281, 284 (2022).

¹⁸⁴ Nathan Markey, Note, *Atlantic Yards Community Benefit Agreement: A Case Study of Organizing Community Support for Development*, 27 PACE ENV'T L. REV. 377, 383–91 (2009).

¹⁸⁵ Clarke, *supra* note 176.

CBA because of “the desire to see accountability from large developers due to the common problem of gentrification in low-income communities following the construction of large developments.”¹⁸⁶

Alternatively, Community Benefit Plans (CBPs) relate to corporate-community agreements. CBPs are public agreements between a developer and a state actor, such as a municipality or development authority; by contrast, GNAs and CBAs are strictly private agreements without the government as a party.¹⁸⁷ For example, the Atlanta City Council approved a CBP for the new Atlanta Falcons stadium in 2013, and the corporation erected the stadium despite a campaign for a CBA.¹⁸⁸ Nevertheless, these agreements can involve community members, such as a City of Detroit ordinance requiring developers behind certain high-dollar projects to meet with designated neighborhood leaders, with provisions of those discussions possibly incorporated into the final agreement between the City and the developer.¹⁸⁹ That ordinance’s history shows that government intervention in the contracting process has constitutional limits: An earlier proposal for the Detroit ordinance had sought to require CBAs (and even to establish a minimum wage that exceeded Michigan’s minimum wage law), which raised questions about improper state action and preemption.¹⁹⁰ The government should, therefore, refrain from mandating corporate-community agreements or even from conditioning projects or permitting approval upon them.¹⁹¹ CBPs also

¹⁸⁶ Stephan, *supra* note 183.

¹⁸⁷ Camacho, *supra* note 170, at 361 (arguing that true CBAs should not include the state or state actors.).

¹⁸⁸ Edward W. De Barbieri, *Do Community Benefits Agreements Benefit Communities?*, 37 CARDOZO L. REV. 1773, 1777–78 (2016).

¹⁸⁹ DETROIT, MICH., CITY CODE §§ 12-8-1 to -5 (Supp. 2024 No. 3, rev.). The Ordinance leads to a report that can be incorporated into the city-developer agreement, and the Ordinance specifically provides that private agreements are not required, although they are allowed. *Id.* § 12-8-3(f). For more about the Detroit ordinance, see *Community Benefits Ordinance*, CITY OF DETROIT, <https://detroitmi.gov/departments/planning-and-development-department/design-and-development-innovation/community-benefits-ordinance> [<https://perma.cc/F9SM-U6ZH>] (last visited Feb. 23, 2024).

¹⁹⁰ De Barbieri, *supra* note 188, at 1793 (discussing preemption of the proposed Detroit ordinance); Colyn Eppes, Note, *Legislatively Mandating a CBA Is Not the Way: A Case Study of Detroit’s Proposed Community Benefits Ordinance and Its Constitutionality Under the Takings Clause of the Fifth Amendment*, 26 J.L. & POL’Y 225, *passim* (2018) (discussing the proposed Detroit ordinance and arguing its unconstitutionality).

¹⁹¹ De Barbieri, *supra* note 188, at 1820 (“Were CBAs to involve a government setting conditions, which they as a rule do not, . . . [then] Supreme Court protections would apply. Since local governments should not be conditioning project approval on CBA terms, then

differ from GNAs and CBAs because they are sometimes aspirational and therefore nonbinding, such as those required for Department of Energy funding applications under the Infrastructure Investment and Jobs Act.¹⁹²

B. The Benefits of Corporate-Community Agreements Include a Community Role in Increasing Safety

Corporate-community agreements provide numerous benefits to both the community coalition and the developer. First, although negotiating these agreements does pose some logistical challenges, they also have the potential to reduce transaction costs.¹⁹³ Proponents of environmental justice note the disproportionate impact of environmental harms on neighborhoods with limited means, often because they do not have the financial resources to mount legal challenges to unfavorable development.¹⁹⁴ Corporate-community agreements provide an alternative path that can permit dialogue and negotiation without the prohibitive cost of litigation.¹⁹⁵ By preempting the need for litigation following a facility opening or the award of a permit, a proactive negotiation process can result in favorable outcomes for all parties.¹⁹⁶

this analysis is not necessary. It is therefore desirable for developers and community groups to negotiate directly through CBAs.”); Christine A. Fazio & Judith Wallace, *Legal and Policy Issues Related to Community Benefits Agreements*, 21 *FORDHAM ENV'T L. REV.* 543, 549–50 (2010) (claiming that “abuse can occur if government officials impose a CBA as part of their approval of a project,” that such an imposition is unlikely to withstand legal challenge, and that such an imposition could run afoul of Supreme Court precedent on exactions).

¹⁹² MATTHEW EISENSEN & ROMANY M. WEBB, *EXPERT INSIGHTS ON BEST PRACTICES FOR COMMUNITY BENEFITS AGREEMENTS 3* (SABIN CTR. FOR CLIMATE CHANGE L. 2023) (citing *About Community Benefits Plans*, U.S. DEP'T OF ENERGY, <https://www.energy.gov/infrastructure/aboutcommunity-benefits-plans> [<https://perma.cc/Z6PS-2MUT>] (last visited Sept. 12, 2023)).

¹⁹³ Camacho, *supra* note 170, at 365–67; De Barbieri, *supra* note 188, at 1813.

¹⁹⁴ See *supra* Sections I(A)–(C).

¹⁹⁵ Siegel, *supra* note 178, at 180, 195 (noting that agreements can generate more beneficial outcomes than litigation and that bargaining can be less costly and resource-intensive than litigation).

¹⁹⁶ De Barbieri, *supra* note 188, at 1813 (calling CBAs “preferable because they frequently resolve disagreements about public project approvals in advance, thus avoiding the costly and time-consuming court process”); Frank, *supra* note 170, at 246 (“CBAs allow the developer to preemptively address community concerns, avoiding much of the protracted negotiations associated with a court challenge to a large project after final approval.”).

Second, these agreements offer a flexible means to address a wider array of concerns than what is covered by governmental regulation.¹⁹⁷ Development authorities are limited on what they can demand from developers via exactions (which must have a sufficient nexus to the project).¹⁹⁸ Still, communities can procure “extralegal concessions” by negotiating directly with businesses.¹⁹⁹ These include living wages for local workers, day care facilities, contributions to economic trust funds, local workforce training, and greenspaces, such as public pedestrian and biking paths.²⁰⁰ The business also receives several benefits. On the front end, the community can pledge its support for the development or expansion of a facility, which increases the chances for project approval and the granting of permits.²⁰¹ On the back end, the community can forbear lawsuits against a facility owner or developer or at least release certain legal claims and address dispute resolution if an accident occurs.²⁰²

Finally, and of most relevance for this Article, corporate-community agreements give community members a role in helping to prevent accidents and, thus, reduce the likelihood of disaster striking. Disadvantaged communities cannot participate effectively in administrative and regulatory processes.²⁰³ Further, because regional and state development authorities are often not required to consult with community groups or even comply with local zoning laws,

¹⁹⁷ Stephan, *supra* note 183, at 288.

¹⁹⁸ See Been, *supra* note 166, at 19–20; Lewis & Henkels, *supra* note 164, at 137.

¹⁹⁹ Michael P. Vandenberg, *Private Environmental Governance*, 99 CORNELL L. REV. 129, 161 (2013) (describing the “extralegal concessions” of GNAs as addressing both safe operations via “additional monitoring and disclosure of toxic emissions” and community benefits like the “provision of parks and health care services”).

²⁰⁰ Berglund, *supra* note 172, at 255; see, e.g., Elizabeth J. Kennedy, *Equitable, Sustainable, and Just: A Transition Framework*, 64 ARIZ. L. REV. 1045, 1091 (2022) (“Such contracts could address community concerns about job creation, living wages, education, and health services during transitions.”).

²⁰¹ Been, *supra* note 166, at 18; Stephan, *supra* note 183, at 285 (“[T]he community advocates typically promise to support the project in the community and at municipal meetings regarding approval of the development.”).

²⁰² Stephan, *supra* note 183, at 285 (“[T]he community . . . may also agree not to sue the developer.”); Gross, *supra* note 182, at 49 (writing that the community may agree to “release legal claims regarding the project”); ROBERT D. BULLARD ET AL., *TOXIC WASTES AND RACE AT TWENTY: 1987-2007*, at 160 (2007), <http://www.ejnet.org/ej/twart.pdf> (recognizing that GNAs should provide “means for dispute resolution”).

²⁰³ Dave Owen, *The Negotiable Implementation of Environmental Law*, 75 STAN. L. REV. 137, 202 (2023) (“Consequently, disadvantaged communities and other public-interest advocates might not achieve better outcomes under a system of bright-line, non-negotiable rules, or under a system in which agencies simply take a range of perspectives under advisement and then issue decisions without negotiating with anyone.”).

communities are frequently overlooked in economic development.²⁰⁴ Corporate-community agreements provide redress through participation and stakeholder engagement.²⁰⁵ For example, companies often have access to information about vulnerabilities and hazards that communities lack.²⁰⁶ Consequently, agreements can require companies to provide information; conduct environmental audits; and fund studies on air, water, or soil quality and industrial impacts on human health.²⁰⁷ Plus, similar to the environmental impact assessments required of federal agencies for their projects,²⁰⁸ these agreements could require such assessments for private developments, including the right to public comment.²⁰⁹

Community members are often better positioned to assess the most likely harms, so a corporate-community agreement provides the means to make the developer more well-informed and prepared by increasing “citizen influence” over business operations.²¹⁰ For example, these agreements can grant community members access to hazard prevention committees and monitoring groups—including authorizing certain people, like union workers, to shut down operations if there is a danger

²⁰⁴ Been, *supra* note 166, at 16–17; De Barbieri, *supra* note 188, at 1815–16.

²⁰⁵ See, e.g., De Barbieri, *supra* note 188, at 1815–16 (CBAs may “give neighborhoods a more meaningful role in the development process than the opportunities the existing land use process provide for public participation.”).

²⁰⁶ See Madison Condon, *Climate Services: The Business of Physical Risk*, 55 ARIZ. ST. L.J. 147, 153 (2023) (“When companies have access to sophisticated modeling about future impacts—some of them potentially devastating for entire communities—the decision to share that information has been largely left up to the corporation.”).

²⁰⁷ BULLARD ET AL., *supra* note 202 (writing that GNAs should address “community access to information [and] environmental and health monitoring”); see, e.g., Madison Condon, *Citizen Scientists, Data Transparency, and the Mining Industry*, 32 NAT. RES. & ENV’T 24, 25 (2017) (discussing a CBA between a mine and a local tribe where the company agreed to reimburse citizen groups up to \$135,000 annually for costs related to citizen sampling on mine premises); Salkin & Lavine, *Understanding*, *supra* note 171, at 306 (noting a developer’s plan “to spend more than \$2 million on an air pollution study as part of its obligations under the CBA”).

²⁰⁸ 42 U.S.C. § 4321 et seq. (1970).

²⁰⁹ For instance, during the scoping process under the National Environmental Protection Act, the public is involved, and agreements could include a provision that requires the developer to solicit public comment. 40 C.F.R. § 6.203 (2024).

²¹⁰ David L. Markell & Robert L. Glicksman, *Dynamic Governance in Theory and Application, Part I*, 58 ARIZ. L. REV. 563, 623 (2016); see Grace Heusner et al., *Defining and Closing the Hydraulic Fracturing Governance Gap*, 95 DENV. L. REV. 191, 236 (2017) (claiming that GNAs and CBAs give “community members enjoy an increased degree of input to ensure the project is tailored to meet the unique needs of their locale.”); see also Condon, *supra* note 206, at 24–26 (describing how citizen science and open data can help secure benefits and mitigate risks).

to worker health or the environment.²¹¹ Agreements can also require the firm to create a team that collaborates with community stakeholders on accident prevention and hazard response.²¹² Other provisions can specifically target operations, such as commitments that the facility invest in specified technology or avoid using specific chemicals.²¹³ Perhaps most importantly, GNAs can require “heavy industrial facilities . . . to formulate accident prevention and preparedness plans, covering such contingencies as chemical spills and fires.”²¹⁴ For activities ranging from mining to agriculture, corporate-community agreements provide a proactive means for citizens to collaborate with industry and thereby prevent operations from causing harm to the environment and the people who inhabit it.²¹⁵

*C. The Drawbacks of Corporate-Community Agreements:
A Lack of Logistics, Representation, Enforceability, and Leverage*

Corporate-community agreements have their drawbacks—particularly for disadvantaged communities. For example, communities face several logistical challenges: members of the affected community must organize, meet to identify and discuss important issues, and then

²¹¹ *E.g.*, BULLARD ET AL., *supra* note 202, at 160 (writing that GNAs should include a community “right to inspect the facility”); Condon, *supra* note 206, at 27 (describing GNAs that allow community members to inspect and to take samples); Lewis & Henkels, *supra* note 164, at 144 (describing an agreement for a Harvard Industries facility in New Jersey where workers can shut down dangerous operations).

²¹² For instance, industrial manufacturer Rhone Poulenc agreed to an oversight agreement with accident prevention and emergency response following a major accident. Lewis & Henkels, *supra* note 164, at 143.

²¹³ van de Biezenbos, *Contracted*, *supra* note 13, at 618; *see also* Markell & Glicksman, *supra* note 210, at 623 (“These agreements may require . . . commitments by the regulated party to reduce pollution . . .”).

²¹⁴ Salkin & Lavine, *Community*, *supra* note 53, at 182–83. And should an accident occur, the contract can also require firms to fund local health care providers and provide emergency response services; *see* Markell & Glicksman, *supra* note 210, at 623 (investments in community services); Siegel, *supra* note 178, at 177 (funding for health care).

²¹⁵ *See* Gerlinde Berger-Walliser et al., *Using Proactive Legal Strategies for Corporate Environmental Sustainability*, 6 MICH. J. ENV’T & ADMIN. L. 1, 17 (2016) (“[A] GNA in Montana between citizens in Stillwater and Sweet Grass counties and the Stillwater Mining Company established a process for citizens to meet regularly with company representatives who can proactively address problems such as the impact of mining, reclamation, and other activities.”); Tory H. Lewis, Note, *Managing Manure: Using Good Neighbor Agreements to Regulate Pollution from Agricultural Production*, 61 VAND. L. REV. 1555, 1559–60 (2008) (describing how GNAs could allow farmers and communities to work together to avoid environmental harms).

reach out to negotiate with business owners.²¹⁶ Because of the power imbalance between businesses and communities,²¹⁷ coalitions typically need legal and technical assistance to negotiate these agreements.²¹⁸ Moreover, coalitions may find it difficult to sustain the energy and effort needed to be active monitors and enforcers of the agreement.²¹⁹ These combined factors result in a time-consuming, challenging, and costly process.²²⁰ Although communities can take steps to alleviate these logistical barriers—such as partnering with labor, religious, and environmental organizations for assistance in organization and negotiation²²¹—many commentators nevertheless criticize the need for communities to rely on these agreements because they shift the high costs of addressing industrial pollution from regulators to resource-strapped communities.²²²

A related criticism is that corporate-community agreements undermine governmental efforts by placing decisions in the hands of groups that may not represent broader community needs. One critic argues that “the current bargaining process clearly devalues the democratic norm of public participation by moving the actual locus of decision-making from the formal process of local government and placing it in the negotiation process.”²²³ Consequently, these contracts might contravene governmental efforts at zoning, land use planning,

²¹⁶ Rachael E. Salcido, *Retooling Environmental Justice*, 39 UCLA J. ENV'T L. & POL'Y 1, 26 (2021) (“Hurdles to these agreements include the need for the community to form a coalition and the money, time, and resources needed to negotiate a contract.”); Frank, *supra* note 170, at 250–54 (noting one challenge with CBAs is bringing together a sufficiently broad coalition).

²¹⁷ van de Biezenbos, *Enforcing*, *supra* note 178, at 48; *see* Been, *supra* note 166, at 24–25 (writing that community groups can have information and experience gaps, resulting in power imbalances).

²¹⁸ Salkin & Lavine, *Understanding*, *supra* note 171, at 323 (“Coalitions that have no experience with CBAs, moreover, will likely need technical and legal assistance throughout the negotiation process.”).

²¹⁹ *Id.* at 324 (“For coalitions that formed for the specific purpose of negotiating a CBA, sustaining the energy for monitoring and enforcement may be difficult. Even for established community groups, the test of time may be difficult as the neighborhood changes and populations fluctuate, leading to an evolution of the community’s goals and development priorities.”).

²²⁰ González & Saarman, *supra* note 169, at 62 (writing that negotiation with business “requires significant transaction costs for the community in the form of time, effort, resources, and legal representation”).

²²¹ Kakade, *supra* note 17, at 371–92; Salkin & Lavine, *Understanding*, *supra* note 171, at 328.

²²² González & Saarman, *supra* note 169, at 41.

²²³ Daniel P. Selmi, *The Contract Transformation in Land Use Regulation*, 63 STAN. L. REV. 591, 642 (2011).

and allocating resources.²²⁴ Additionally, coalitions might not represent broader community concerns or the wishes of a majority of the community;²²⁵ instead, contractual benefits might go to small groups rather than the whole community.²²⁶ Finally, unelected negotiators also raise questions about accountability and transparency when they conduct transactions behind closed doors.²²⁷ For example, critics of the Atlantic Yards CBA complained that community organizers failed to build a representative coalition and that negotiations were insufficiently public.²²⁸

The fact that there have been few legal challenges to corporate-community agreements suggests that these agreements have succeeded in reducing problems between firms and communities.²²⁹ That also means that courts have yet to resolve several potential issues about their validity and enforceability.²³⁰ One issue concerns consideration, the

²²⁴ See, e.g., Baram, *supra* note 168, at 231 (writing that CBAs “may interfere with land use plans and zoning”); Steven M. Seigel, *Community Benefits Agreements in a Union City: How the Structure of CBAs May Result in Inefficient, Unfair Land Use Decisions*, 46 URB. LAW. 419, 424 (2014) (“CBAs may also result in deleterious consequences, such as under protecting interests traditionally served by land use controls, or making more costly the provision of public or quasi-public goods.”).

²²⁵ See De Barbieri, *supra* note 188, at 1789–90 (noting one criticism of CBAs is that those who negotiate them may not represent community interests).

²²⁶ See, e.g., Seigel, *supra* note 224, at 424 (arguing that union strength in organizing might lead to CBAs that privilege labor issues over local community concerns); Ori Sharon, *Fields of Dreams: An Economic Democracy Framework for Addressing NIMBYism*, 49 ENV'T L. REP. NEWS & ANALYSIS 10264, 10274 (2019) (discussing the danger of “divide and conquer” recruitment, where developers negotiate only with select community stakeholders who can help overcome opposition to getting a project completed).

²²⁷ Been, *supra* note 166, at 21–22 (writing that private negotiations do not require public hearings); Selmi, *supra* note 223 (discussing how the CBA negotiation process raises concerns about democratic transparency).

²²⁸ Markey, *supra* note 184, at 386–87.

²²⁹ Sofia Johnson, Note, *Putting the Public in Public Transit: A Proposed Amendment to the Citizen Participation Regulations Implementing the National Environmental Policy Act*, 50 FORDHAM URB. L.J. 255, 299 (2023) (noting that the lack of litigation suggests that CBAs successfully resolve conflicts between developers and communities). A January 20, 2025, Westlaw search of “community benefit agreement” and then of “good neighbor agreement” in “All Federal Cases” yielded only nine mentions of CBAs and one of GNAs, with none that are directly relevant to the content and enforceability of these agreements. *Thompson Reuters: Westlaw Precision*, WESTLAW, ([https://1.next.westlaw.com/Search/Home.html?transitionType=Default&contextData=\(sc.Default\)](https://1.next.westlaw.com/Search/Home.html?transitionType=Default&contextData=(sc.Default))) (navigate to “Cases” then “All Federal Cases” to then search for “community benefit agreement” and “good neighbor agreement”; then select “Reported” under “Reported Status” in the “Filters” sidebar) (last searched January 20, 2025).

²³⁰ van de Biezenbos, *Enforcing*, *supra* note 178, at 45 (viewing enforceability as the greatest challenge in private environmental governance).

legal detriment incurred by both parties.²³¹ The firm's detriments are the observable and measurable benefits it provides the community, like green spaces, buffers, guarantees of local hiring, affordable housing, and environmental and safety covenants.²³² The thornier issue is whether the community incurs a detriment.²³³ While courts typically do not inquire into the relative value of the parties' bargained-for exchange, they can hold that an agreement lacks consideration if the discrepancy shocks the conscience or if the detriment incurred by one party is illusory.²³⁴ For example, one commentator questions the coalition's legal detriment in the Atlantic Yards CBA since it did not represent all potential community opposition.²³⁵ Another commentator, however, relies on the *Restatement (Second) of Contracts* to conclude that the community promises to act (like writing letters of support, providing positive testimony, and consenting to arbitration) and to forbear (like agreeing not to oppose a project publicly or promising not to sue) should be sufficient consideration.²³⁶ Even then, however, a court may still decline to enforce an agreement if the terms are vague or ambiguous.²³⁷ For example, one study of the Los Angeles sports and entertainment CBA characterizes several provisions on jobs, housing, and parks as either ambiguous or intentionally nonbinding and, therefore, unenforceable.²³⁸

²³¹ Sharon, *supra* note 226.

²³² Stephan, *supra* note 183, at 290–91.

²³³ Sharon, *supra* note 226 (recognizing that consideration can be an issue with CBAs if the community does not incur a legal detriment).

²³⁴ Naved Sheikh, Note, *Community Benefits Agreements: Can Private Contracts Replace Public Responsibility?*, 18 CORNELL J.L. & PUB. POL'Y 223, 233–34 (2008); see RESTATEMENT (SECOND) OF CONTS. § 79 (AM. L. INST. 1981) (stating that courts rarely void a contract for lack of consideration).

²³⁵ Sheikh, *supra* note 234; see Been, *supra* note 166 (writing that CBAs are sometimes aspirational instead of concrete).

²³⁶ Stephan, *supra* note 183, at 296–99 (citing RESTATEMENT (SECOND) OF CONTS. §§ 71–72 (AM. L. INST. 1981)); see Lewis, *supra* note 215, at 1591 (claiming that consideration exists in a clause mandating binding arbitration and preventing nuisance lawsuits).

²³⁷ Alex Geisinger, *The Benefits of Development and Environmental Injustice*, 37 COLUM. J. ENV'T L. 205, 241 (2012) (noting concerns about enforceability because “the terms of a CBA are often ambiguous”).

²³⁸ Nicholas J. Marantz, *What Do Community Benefits Agreements Deliver? Evidence from Los Angeles*, 81 J. AM. PLAN. ASS'N 251, 256, 257 tbl.2 (2015); see Kakade, *supra* note 17, at 377–78 (describing criticisms of the housing built pursuant to the Atlantic Yards CBA as being insufficiently “affordable”). Another enforceability question concerns the standing of individual community groups or third-party beneficiaries to bring lawsuits on the contract. Cf. Salkin & Lavine, *Understanding*, *supra* note 171, at 325 (suggesting that

These drawbacks combine to decrease the leverage that marginalized communities have to bring businesses to the negotiating table.²³⁹ After all, why would a facility owner agree to concessions if it might still be subject to lawsuits by non-coalition members or if the agreement lacks consideration or is otherwise unenforceable?²⁴⁰ Low-income communities in particular lack leverage because they lack political and legal power.²⁴¹ For example, developers are more likely to negotiate when projects are in thriving or up-and-coming markets.²⁴² Further, plaintiffs' past failures in tort lawsuits might also push businesses to forego negotiations if they perceive that formal proceedings will result only in delaying a project.²⁴³ Even if the business does negotiate, the amount of benefits the community can procure is limited by the extent of community leverage, which again is typically only the ability to delay a project.²⁴⁴ Indeed, critics charge firms with conceding only the minimum needed to buy off community

each community group that negotiates, not just the coalition as a whole, sign the agreement); Stephan, *supra* note 183, at 305 (noting that third-party beneficiaries are rarely mentioned in community-developer contracts).

²³⁹ Selmi, *supra* note 223, at 642 (noting that “developers have little incentive to enter” into CBAs); Siegel, *supra* note 178, at 172–73 (“[T]he biggest obstacle to a GNA is persuading representatives of the polluting facility to negotiate with communities in the first place.”).

²⁴⁰ See Sheikh, *supra* note 234, at 234 (writing that developers perceive no benefit if the community coalition does “not represent the entire community, let alone the universe of likely public opposition that the developers were probably hoping to contract away”). Another potential liability arises if developers are not able to delegate their responsibilities if they sell the property. Stephan, *supra* note 183, at 303 (claiming that “delegation[] agreements with clear language addressing successors and assigns are likely to be enforceable and the duties could successfully be delegated to third parties,” assuming an “absence of policy reasons not to enforce” these agreements); see RESTATEMENT (SECOND) OF CONTS. § 318 (AM. L. INST. 1981) (giving examples of exceptions to delegation that include duties expressly forbidden by an antidelegation clause, duties personal in nature, and duties resulting in performance substantially different from that which the obligee originally contracted).

²⁴¹ Geisinger, *supra* note 237, at 241 (writing that “the organized opposition must have enough legal or political power to create a need on the part of the developer to negotiate.”).

²⁴² Sharon, *supra* note 226.

²⁴³ Geisinger, *supra* note 237, at 241 (“If there is no basis in existing land use or environmental law for communities to take issue with a permit, delay caused by the challenge process is the extent of a community group’s leverage.”); Siegel, *supra* note 178, at 173–75 (opining that one reason firms decline to negotiate is that the threat of tort lawsuits is weak since plaintiffs frequently fail to prevail on claims like nuisance).

²⁴⁴ Geisinger, *supra* note 237, at 241 (“[T]here is little principled means for determining the amount of benefits to be provided. Put simply, when negotiating a CBA, a developer will provide benefits only to the extent necessary to pacify a community group holding leverage. In many cases, the leverage may just be the ability to delay development.”).

leaders to move a project forward.²⁴⁵ Though the lack of financial resources may seem to doom low-income communities, Part IV combines insight from environmental and disaster justice to argue that they can nevertheless create leverage to negotiate effective GNAs and CBAs.

IV

COMBINING THE THREE LITERATURES FOR BETTER INSIGHT

Reading all three literatures together provides a better understanding of disasters related to hazardous business operations. The three literatures point the way toward a legal framework that can better protect at-risk communities. All three share relevant themes, including that certain communities are more vulnerable to disaster, the government has been insufficiently responsive to those communities, and communities must be empowered to prevent disaster from striking. Unfortunately, each literature in isolation suffers from deficiencies that render it ineffective in forming the basis for legal solutions. Environmental justice has too limited a frame to encompass certain vulnerable persons or to embrace collaboration with businesses, disaster law and justice are too focused on command-and-control correctives, and advocates of corporate-community agreements bemoan logistical and leverage issues that hinder marginalized communities from negotiating effective, enforceable contracts with businesses. Reading the literatures together, however, allows each shortcoming to be bolstered by perspectives from the others. A legal framework emerges from a combined perspective: By being responsive to community claims and by recognizing and enforcing corporate-community agreements, the government can help empower at-risk communities to negotiate agreements that minimize the chance of business operations leading to disaster.

A. Common Themes: At-Risk Communities, Government Ineffectiveness, and Empowerment to Prevent Harm

All three literatures share common themes. First, certain communities are more at risk of disasters, including those posed by

²⁴⁵ Sharon, *supra* note 226; see Christiana Ochoa et al., *Deals in the Heartland: Renewable Energy Projects, Local Resistance, and How Law Can Help*, 107 MINN. L. REV. 1055, 1103 (2023) (criticizing how wind farm developers negotiate GNAs only with those community members who are needed to bypass the restrictions of county ordinances via contract).

business operations. Environmental justice emphasizes the distributive injustice of the proximity of hazardous facilities like utilities, waste disposal, and manufacturing plants to low-income and minority neighborhoods.²⁴⁶ The fields of disaster law and justice emerged in response to the disproportionate exposure to and impact of disasters on vulnerable populations.²⁴⁷ GNAs are a contractual means for communities near mines, industrial facilities, and agricultural operations to mitigate hazards, whereas CBAs respond to the adverse impacts of development projects on marginalized communities.²⁴⁸

The second common theme is that the government has insufficiently protected these communities from disaster. The environmental justice literature has shown that environmental laws are underenforced in low-income and minority communities, that those communities lack meaningful opportunities for public participation, and that authorities may be more interested in economic development and in regional (rather than local) environmental concerns.²⁴⁹ Disaster law scholars have found U.S. compensation schemes inadequate,²⁵⁰ and disaster injustice exists because of the government's failure to build resilience, decrease vulnerability, and respond to community voices.²⁵¹ Advocates of corporate-community agreements argue that regulatory processes often overlook the needs of marginalized communities, but contract law provides a private means to procure environmental protections and community benefits.²⁵²

The third common theme is that these communities must be strengthened. Because the lack of political engagement correlates with facility siting and underenforcement, environmental justice communities have responded through the collective action of grassroots activism and formal proceedings, which create a sense of identity and can lead to settlements that address local needs.²⁵³ Disaster justice scholars call for a more responsive government that makes communities resilient against disaster.²⁵⁴ Through corporate-

²⁴⁶ See *supra* Section I(A).

²⁴⁷ See *supra* Sections II(A)–(B).

²⁴⁸ See *supra* Section III(A).

²⁴⁹ See *supra* Section I(B).

²⁵⁰ See *supra* text accompanying notes 110–17.

²⁵¹ See *supra* Section II(B).

²⁵² See *supra* Section III(A); see also *supra* text accompanying notes 197–200.

²⁵³ See *supra* Section I(C).

²⁵⁴ See *supra* Section II(B); see also Fineman, *Anchoring*, *supra* note 148 (arguing for a more responsive government to decrease vulnerability and increase resilience).

community agreements, communities can play an active role in identifying and mitigating potential hazards.²⁵⁵

The final common theme is the need to prevent the harmful consequences of business operations and disasters. Even when existing law does not favor environmental justice communities, they nevertheless pursue formal proceedings in part to change the law and to prevent future harms.²⁵⁶ In disaster law, mitigation may be the most critical stage of the disaster cycle: Not only is mitigation first but it is also the ultimate goal of the last stage, recovery.²⁵⁷ Corporate-community agreements are proactive legal solutions,²⁵⁸ with common contract provisions including company reporting requirements, community monitoring, and specific terms that address safe operations.²⁵⁹

B. Perspectives from Each Can Offset Shortcomings of the Others

Each literature in isolation fails to address the problem of business-caused disasters, but combining them allows for perspectives from each to offset individual shortcomings. For example, environmental justice focuses on race and socioeconomic status, which can exclude the needs of other populations that may also be at heightened risk of disaster.²⁶⁰ Disaster law and justice, however, promote a broader view of vulnerability, with attributes that include race and class but also age, disability, and imprisonment (among others).²⁶¹ Moreover, unlike EJScreen, the SoVI is a screening tool that combines numerous factors to identify communities at high risk and their sources of vulnerability.²⁶²

The environmental justice frame also tends to villainize businesses, foreclosing the potential for collaboration and stymieing economic development in areas that need it.²⁶³ By contrast, advocates of

²⁵⁵ See *supra* text accompanying notes 201–15.

²⁵⁶ See *supra* text accompany notes 78–81.

²⁵⁷ See *supra* Section II(A).

²⁵⁸ See Berger-Walliser et al., *supra* note 215 (listing GNAs as an example of a proactive legal strategy).

²⁵⁹ See *supra* Sections III(A)–(B).

²⁶⁰ See *supra* text accompanying notes 83–91.

²⁶¹ See Hoffman, *supra* note 154, at 1497.

²⁶² Compare Cutter & Emrich, *supra* note 133, at 1–2 (describing how SoVI uses twenty-nine variables to identify highly vulnerable communities and the sources of vulnerability), with Villa, *Remaking*, *supra* note 17, at 504 (noting that EJSCREEN does not “identify or label an area as an ‘EJ community’”).

²⁶³ See *supra* text accompanying notes 94–97.

corporate-community agreements have long viewed businesses as integral members of the community, rather than separate—highlighting the need for collaboration among neighbors.²⁶⁴ Environmental justice scholars do not necessarily oppose negotiation and collaboration; after all, environmental justice communities have used formal proceedings to negotiate settlements.²⁶⁵ This means that these communities are already pursuing GNAs and CBAs, as with a Chevron refinery’s settlement of a lawsuit brought by community organizations from Richmond, California, that included the installation of leakless valves and five million dollars for the community.²⁶⁶ Rather than take a reactionary, adversarial stance toward businesses, communities should adopt a proactive approach toward them.²⁶⁷ Further, one environmental justice scholar has claimed that collaborative efforts between communities and governmental authorities may foster “responsibility and commitment to joint problem-solving, spur innovative solutions,” enhance lasting citizen engagement, and “mobilize diverse resources.”²⁶⁸ As discussed in Section III(B), these same benefits flow from community-business collaboration but shift negotiations directly to the owners of hazardous operations.

Disaster law and justice fall short by equating a more responsive government with the expansion of top-down legislative and regulatory approaches.²⁶⁹ This ignores the experiences of environmental justice communities where governmental indifference has contributed to distributive injustice, and even when regulators do address injustice, they may focus more on regional rather than local issues.²⁷⁰ Indeed, governmental efforts have fallen short despite federal and state initiatives to address environmental justice.²⁷¹ Instead of assuming responsibility for making communities more resilient, the government can help communities be more self-sufficient by providing them with

²⁶⁴ See Gary D. Bass & Alair MacLean, *Enhancing the Public’s Right-to-Know About Environmental Issues*, 4 VILL. ENV’T L.J. 287, 298 (1993) (“[C]itizens and workers should view corporations as neighbors and apply similar standards of behavior to them.”).

²⁶⁵ See *supra* text accompanying notes 74–77.

²⁶⁶ Lewis, *supra* note 215, at 1586 (writing that GNAs can “serve as settlement agreements”).

²⁶⁷ Berger-Walliser & Shrivastava, *supra* note 108, at 435 (calling one of the “main objectives” of proactive law strategies like GNAs “to prevent problems and litigation, and to use the law as a lever to create value for the company, the individual, or society at large.”).

²⁶⁸ Lashley, *supra* note 31, at 188–89.

²⁶⁹ See *supra* text accompanying notes 146–55.

²⁷⁰ See *supra* Section I(B).

²⁷¹ *Id.*

a legal framework that facilitates collaborative approaches.²⁷² Those approaches include corporate-community agreements, which empower communities to craft their own solutions to what they see as local problems—as well as to procure benefits like jobs and green spaces—and to do more than public law allows since contracts are governed by private law.²⁷³

The literature on GNAs and CBAs recognizes several concerns with these agreements, particularly for marginalized communities.²⁷⁴ For example, some commentators opine that low-income communities lack the means to organize effectively and sustain the needed energy to act as monitors.²⁷⁵ These shortcomings seemingly apply to environmental justice communities' efforts at grassroots activism, yet those strategies are recognized as a means for the excluded to claim power—and even a community identity—through collective action.²⁷⁶ Indeed, the concept of CBAs should motivate communities to unite for more than the fight against environmental “bads” since they can also procure environmental “goods.”²⁷⁷ As another example, some scholars argue that these agreements undermine democratic norms, serve limited rather than broad community interests, and lack transparency.²⁷⁸ Environmental justice advocates contend, however, that public processes have failed to heed the voices of environmental justice communities.²⁷⁹ Accordingly, these agreements have “democratic value” because they build communal capital and promote civic

²⁷² Roesler, *supra* note 39, at 247 (claiming that the law can best respond to environmental justice concerns “by providing a legal framework . . . that supports collaborative solutions”); see Foster, *supra* note 42, at 472–73 (arguing that collaborative groups have shown that state power is not always necessary).

²⁷³ See *supra* Section III(B).

²⁷⁴ See *supra* Section III(C).

²⁷⁵ See *supra* text accompanying notes 213–19.

²⁷⁶ See *supra* Section I(C); see also DAVID E. CAMACHO, ENVIRONMENTAL INJUSTICES, POLITICAL STRUGGLES: RACE, CLASS, AND THE ENVIRONMENT 1, 4 (David E. Camacho ed., 1998) (writing that social movements are “rational attempts” by the excluded “to mobilize sufficient political leverage to advance collective interests through noninstitutionalized means.”).

²⁷⁷ See Colin Crawford, *Environmental Benefits and the Notion of Positive Environmental Justice*, 32 U. PA. J. INT'L L. 911, 914 (2011) (arguing that recognizing the “right to environmental goods” is “at least as important as the right to be protected from environmental harms”).

²⁷⁸ See *supra* text accompanying notes 223–28.

²⁷⁹ See *supra* Section I(B).

engagement,²⁸⁰ and they can lead to tailored solutions for local issues.²⁸¹

The lack of leverage manifests throughout the contracting process: Businesses have little incentive to negotiate; even if they do negotiate, then the community may not secure favorable terms; and even then, the agreement might lack consideration, or courts may not enforce it.²⁸² As discussed more fully in the next Section, insight from both environmental justice and disaster justice suggests that communities have more leverage than many commentators think and that authorities already have the means to be more responsive.

C. A Responsive Government Prevents Disasters by Strengthening At-Risk Communities to Negotiate

Combining key concepts from all three literatures suggests a legal framework for preventing local disasters: By being responsive to community claims, the government strengthens at-risk communities to negotiate with businesses and procure agreements that target hazardous operations. Environmental justice has shown the willingness to fight creates leverage so that communities can negotiate favorable terms. Disaster justice scholars call for a more responsive government to help build resilient communities, and the potential for private-law contracts to involve community members in hazard reduction shows that responsiveness need not equate to regulation. While legislation or ordinances requiring businesses in hazardous sectors to procure corporate-community agreements might seem to help,²⁸³ such state mandates are likely unlawful (and controvert the essence of freedom of contract).²⁸⁴ Instead, this Section describes how the government

²⁸⁰ Sharon, *supra* note 226, at 10273.

²⁸¹ See *supra* Section I(C); see also Candice Youngblood, Note, *Put Your Money Where Their Mouth Is: Actualizing Environmental Justice by Amplifying Community Voices*, 46 *ECOLOGY L.Q.* 455, 474 (2019) (“The community must have a role in solving the EJ issue for the issue to be solved . . .”).

²⁸² See *supra* text accompanying notes 230–45.

²⁸³ See Stephanie M. Gurgol, Comment, *Won’t You Be My Neighbor? Ensuring Productive Land Use Through Enforceable Community Benefits Agreements*, 46 *U. TOL. L. REV.* 473 *passim* (2015) (arguing for legislation that empowers municipalities to mandate CBAs).

²⁸⁴ See *supra* text accompanying notes 189–90; see, e.g., Elizabeth R. Carter, *Rethinking Premarital Agreements: A Collaborative Approach*, 46 *N.M. L. REV.* 354, 367 (2016) (calling freedom of contract “fundamental” to “most western legal systems” and “essential to a free society”); Kakade, *supra* note 17, at 366 (“The idea of freedom to contract means that contracting parties get to choose with *whom* they want to contract and *what* to include in the contract.”).

has other levers to facilitate negotiation. For example, courts have shown some receptiveness to community claims, such as by lowering procedural and evidentiary barriers and by expanding common law tort. Plus, scholarship has laid a foundation for courts to go even further and thus be even more responsive. In addition, permitting authorities and courts can give more recognition to these agreements, such as by treating them as a positive factor in permit decisions and by allowing for easy enforcement.

One oft-cited obstacle to the formation of an effective corporate-community agreement is a perceived imbalance of power: Wealthy firms seemingly have no reason to negotiate, and even if they do, any contract that does result will likely favor the company because marginalized communities lack the financial means (and thus the leverage) to secure terms that adequately protect them from hazardous operations.²⁸⁵ As discussed in Section I(C), *supra*, communities can nevertheless build value (and thus leverage) through nonfinancial means, such as public protest, permit challenges, and tort lawsuits²⁸⁶—including lawsuits that preempt disasters—by addressing hazardous conditions.²⁸⁷ Moreover, the community does not actually have to engage in these combative tactics to entice developers to negotiate and to secure favorable terms: The mere potential for collective community action that could cause a necessary permit to be revoked or result in massive tort liability can motivate companies to work with communities on measures to reduce the chance of disaster.²⁸⁸ For

²⁸⁵ See *supra* text accompanying notes 239–45; see also Spencer Banzhaf et al., *Environmental Justice: The Economics of Race, Place, and Pollution*, 33 J. ECON. PERSPS. 185, 199 (2019) (questioning the Coaseian economics theory that the right to pollute ends up in the hands of those who most value it since low-income persons have a lower willingness to pay because of the inability to pay).

²⁸⁶ See Banzhaf et al., *supra* note 285 (claiming that local communities have “property rights” in the form of “tort law, zoning laws, holding up permitting processes, [and] political protest”); see also van de Biezenbos, *Contracted*, *supra* note 13, at 618 (“Examples of potentially effective leverage wielded by communities include citizen lawsuits under federal environmental statutes, control over permitting processes, and creating bad press for the companies through protests, rallies, and the like.”); Villa, *No Box*, *supra* note 84, at 204 (writing that the potential for liability leads to “increasing leverage for environmental justice advocates”).

²⁸⁷ Giampetro-Meyer & Kubasek, *supra* note 29, at 53 (“[P]reemptive lawsuits—i.e., filing suit long before a disaster occurs—by concerned citizens could also be a useful tool for compelling firms to clean up now before it is too late.”).

²⁸⁸ *Id.* at 53 (“The looming threat of being sued post-disaster for pollution spilled during a storm may be enough to spur some firms into taking extra pre-disaster precautions.”); Thomas Landers, Note, *A New Path to Climate Justice: Adaptation Suits Against Private*

example, this happened with the Stillwater Mining Company, which agreed to a GNA when “threatened with potential lawsuits from the community.”²⁸⁹

It may seem foolish for a firm to agree to a GNA or CBA that limits how it can operate, allows community members to monitor those operations, and requires it to provide jobs and other amenities. After all, commentators criticize the law as ineffective for providing communities relief from business hazards and compensation schemes as insufficient for remediating harm.²⁹⁰ Yet the collective action of marginalized communities has already pushed courts to be more responsive.²⁹¹ Plus, courts are justified in lowering procedural barriers and expanding the common law even further. As a result, communities have increasing leverage because of the potential for costly lawsuits and large money damages should business operations lead to disaster.²⁹² The savvy company should seek to avoid these adverse consequences via a corporate-community agreement that limits liability and addresses dispute resolution²⁹³—or, at the very least, reduces the chance of being sued.²⁹⁴

One factor that increases community leverage is lowered procedural and evidentiary barriers. For example, common disasters make the

Entities, 30 GEO. ENV'T L. REV. 321, 327–29 (2018) (claiming that the “prospect of litigation” can entice companies to assess risk and thus take on adaptation measures to prevent “climate-change-fueled disasters”).

²⁸⁹ Lewis, *supra* note 215, at 1587.

²⁹⁰ See *supra* text accompanying notes 68–70, 112–18.

²⁹¹ See Todd, “*Sense of Equity*,” *supra* note 61, at 200.

²⁹² See Villa, *No Box*, *supra* note 84, at 204 (“Credible and increasing potential for liability under Title VI, § 1983, constitutional law, and tort law all add up to increasing leverage for environmental justice advocates to seek and negotiate settlement agreements, including injunctive relief to address environmental justice concerns.”).

²⁹³ See van de Biezenbos, *Contracted*, *supra* note 13, at 619 (“[C]ommunities that enter these agreements will likely have to surrender present or future legal rights in order to obtain industry consent.”); BULLARD ET AL., *supra* note 202 (recognizing that GNAs should provide “means for dispute resolution.”).

²⁹⁴ See De Barbieri, *supra* note 188, at 1813 (calling CBAs “preferable because they frequently resolve disagreements about public project approvals in advance, thus avoiding the costly and time consuming court process”); Berger-Walliser & Shrivastava, *supra* note 108, at 435 (claiming that proactive law strategies, like GNAs, can prevent litigation by “us[ing] the law as a lever to create value for the company, the individual, or society at large”); cf. Bradshaw, *supra* note 96, at 686 (writing, in the context of community-agency collaboration, that “agencies believe they are less likely to be sued, or to lose a lawsuit, for a decision that accords with a set of recommendations from a stakeholder collaboration.”).

certification and settlement of class claims easier.²⁹⁵ Also, although justiciability doctrines and displacement might thwart some causes of action (such as those for federal public nuisance), commentators have argued that they do not apply to others—such as state common law nuisance.²⁹⁶ In addition, some states have rebuttable presumptions regarding proximate cause, and one commentator has argued for the expansion of rebuttable presumptions.²⁹⁷ Finally, courts can consider vulnerability and environmental justice screening tools: Several states explicitly allow digital exhibits and mapping tools into evidence, and courts can take judicial notice of federal and state agency tools like the SoVI, SVI, EJScreen, and state counterparts.²⁹⁸

Another leverage factor is expanded—or at least the potential for courts to expand—common law torts in situations relevant to business-caused disasters. For example, courts have allowed negligence per se for the violation of environmental statutes and strict liability for the release of certain hazardous substances.²⁹⁹ Commentators urge judges to exercise their power and expand the common law even further. Two proposals are particularly relevant for disasters related to business activities: Courts could impose a heightened duty on utilities and other companies to take preventive measures to reduce the risks posed by

²⁹⁵ Jessica Holmes, Note, *Aggregation: An Essential Tool in Achieving Imperative Environmental Enforcement, Protection, and Justice*, 52 ENV'T L. 547, 555 (2022) (citing *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 625 (1997)) (writing that plaintiffs who are part of a mass disaster can more easily satisfy the predominance requirement for class certification and settlement); see FED. R. CIV. P. 23 (addressing class actions).

²⁹⁶ E.g., Jonathan H. Adler, *Displacement and Preemption of Climate Nuisance Claims*, 17 J.L. ECON. & POL'Y 217, 220, 222 (2022) (distinguishing between displacement and preemption and arguing that, even if federal statutes displace federal common law claims related to the adverse impact of climate change, they do not preempt state common law claims); Todd, *supra* note 82, at 637 (writing that “there is no constitutional basis for applying a standing analysis to lawsuits when plaintiffs seek to vindicate personal injuries through common law tort”).

²⁹⁷ Seema Kakade, *Environmental Evidence*, 94 U. COLO. L. REV. 757, 808–09 (2023) (describing how rebuttable presumptions are already part of environmental law, such as state laws regarding oil and gas activity as proximate cause).

²⁹⁸ Brian Craig, *Online Satellite and Aerial Images: Issues and Analysis*, 83 N.D. L. REV. 547, 573 (2007) (“The law appears settled that courts may take judicial notice of official government maps.”); Paul W. Grimm et al., *Authenticating Digital Evidence*, 69 BAYLOR L. REV. 1, 35 (2017) (“Judicial notice may be taken of postings on government websites, including . . . [f]ederal, state, and local agency, department and other entities’ websites”); Kakade, *supra* note 297, at 810–11 (discussing state laws on the admissibility of digital evidence, web mapping, and geographic information systems).

²⁹⁹ Alexandra B. Klass, *CERCLA, State Law, and Federalism in the 21st Century*, 41 SW. L. REV. 679, 694 (2012) (describing negligence per se for the violation of environmental statutes); *id.* at 696–97 (describing strict liability for the release of hazardous substances and PCBs).

extreme weather events like hurricanes and wildfires,³⁰⁰ and they could reject the act of God defense in tort cases like those related to the release of toxic substances in Hurricane Harvey since climate change science makes it foreseeable that storms are becoming more frequent and more severe.³⁰¹ Other proposals include tweaking nuisance claims to be easier to prove,³⁰² imposing strict liability on utilities for wildfire damage,³⁰³ and expanding the universe of remedies, such as granting more equitable relief and allowing pain and suffering even for sudden disasters.³⁰⁴ The bankruptcy system could bolster common law remedies by allowing unresolved claims to survive Chapter 11 bankruptcy.³⁰⁵

Governmental authorities can also be more responsive by affording greater recognition to corporate-community agreements. For example, while authorities cannot make such contracts a condition for a permit, these contracts can be “helpful adjuncts to the land use process” and,

³⁰⁰ Jim Rossi & Michael Panfil, *Climate Resilience and Private Law's Duty to Adapt*, 100 N.C. L. REV. 1135, 1140–42 (2022) (arguing that utilities should have a common law tort duty to adapt by taking reasonable safety precautions to reduce risks from extreme weather risks like hurricanes and wildfires); Romany M. Webb et al., *Climate Risk in the Electricity Sector: Legal Obligations to Advance Climate Resilience Planning by Electric Utilities*, 51 ENV'T L. 577, 629–37 (2021) (urging a tort duty to plan for extreme weather events).

³⁰¹ Sarah Martinez, *Houston After Harvey: The Act of God Defense in the Climate Change Era*, 53 TEX. ENV'T L.J. 1, 2 (2023).

³⁰² Mandy Garrells, *Raising Environmental Justice Claims Through the Law of Public Nuisance*, 20 VILL. ENV'T L.J. 163, 180 (2009) (arguing that state courts should follow the lead of Hawaii and replace the special injury rule with the injury-in-fact rule for public nuisance); Kyra G. Bradley, Note, *Environmental Justice Class Action Rises Above the Rubbish: The Third Circuit Revives Common-Law Nuisance Remedies in Baptiste v. Bethlehem Landfill Co.*, 32 VILL. ENV'T L.J. 209, 231–33 (2021) (arguing for a broader application of public and private nuisance).

³⁰³ Klass, *supra* note 299, at 696–97 (discussing strict liability for the release of hazardous substances); Elias Kohn, *Mitigating PG&E's Wildfire Ignitions: A Framework for Environmental Resilience and Economic Stimulus*, 12 GEO. WASH. J. ENERGY & ENV'T L. 3, 4 (2021) (arguing strict liability for utilities responsible for wildfire damage).

³⁰⁴ Colangelo, *supra* note 46, 317–18 (arguing that courts can use equity as part of enforcing federal environmental statutes to mitigate the harm done); Andrew Tangel, *Boeing 737 MAX Victims' Families Can Seek Compensation for Pain and Suffering, Judge Rules*, WALL ST. J. (May 30, 2023, 10:14 PM), <https://www.wsj.com/articles/boeing-737-max-victims-families-can-seek-compensation-for-pain-and-suffering-judge-rules-6dd8aef5> [https://perma.cc/3FP5-CUD8] (reporting on judge's ruling that plaintiffs in wrongful death lawsuits for Boeing 737 MAX crashes could recover damages for passengers' precrash pain and suffering).

³⁰⁵ Vincent S.J. Buccola & Joshua C. Macey, *Claim Durability and Bankruptcy's Tort Problem*, 38 YALE J. ON REG. 766, 771 (2021) (arguing that courts through judicial fiat could allow an entity's tort claims to survive Chapter 11 bankruptcy if that entity does not resolve those claims).

thus, be considered as a positive factor—assuming that the parties are transparent about the agreement and the negotiating process behind it and that negotiations occur outside of formal land planning processes.³⁰⁶ Authorities have discretion in the issuance of permits, particularly for hazardous operations in already-overburdened areas.³⁰⁷ Sometimes they exercise that discretion by denying permits for failing to address impacts on vulnerable communities, as with one solar farm developer’s proposal for a facility near a predominantly African American community in Florida, thus prompting the developer to confer with community members.³⁰⁸ By procuring an agreement beforehand, however, the developer could have shown not only that it addressed community concerns but also that it had community support. Another reason why companies should be motivated to procure agreements is that some courts have reversed the issuance of permits where the authorities did not include an environmental justice analysis.³⁰⁹ Since courts have created a rebuttable presumption that a facility’s operations are hazardous, but the existence of a corporate-community agreement (particularly with provisions for an environmental justice assessment) provides evidence that rebuts the presumption by showing that the impact on vulnerable communities has been addressed.³¹⁰

Finally, judges should readily enforce corporate-community agreements, and communities can ensure that they do so by following best practices and by giving sufficient consideration. In response to criticisms that the negotiation process can fail to include broad community perspectives and result in an agreement with vague or

³⁰⁶ Been, *supra* note 166, at 32; see Fazio & Wallace, *supra* note 191, at 550 (writing that permitting authorities can consider CBAs that are reached independent of land use processes).

³⁰⁷ Christopher D. Ahlers, *Race, Ethnicity, and Air Pollution: New Directions in Environmental Justice*, 46 ENV’T L. 713, 754 (2016) (arguing that local governments can “impose conditions to restrict the addition of heavily-polluting industries into low-income minority communities based on the air pollution load in the community.”).

³⁰⁸ Wyatt G. Sassman, *Community Empowerment in Decarbonization: NEPA’s Role*, 96 WASH. L. REV. 1511, 1512–14, 1514 n.18 (2021).

³⁰⁹ Villa, *No Box*, *supra* note 84, at 191 (citations omitted) (surveying federal cases regarding legal principles of environmental justice and finding that courts have invalidated federal actions for failure to analyze and incorporate environmental justice concerns into decision-making).

³¹⁰ Kakade, *supra* note 297, at 810 (discussing the rebuttable presumption about the existence of harmful pollutants in permit cases); see *id.* at 761–63 (arguing that “community evidence”—“the range of tools that regular people can meaningfully and easily access, document, and present to judges to tell their story”—has been allowed in permitting cases and arguing for its expansion).

ambiguous terms, commentators have developed best practices for communities and developers.³¹¹ For example, to ensure that the agreement is satisfactory to a majority of interested parties, the negotiation process must be transparent and include adequate representation.³¹² Organizers should therefore reach out to as many interested parties as possible and be conscientious about equitably distributing benefits.³¹³ Considering accountability and enforceability also helps strengthen the contract.³¹⁴ To avoid ambiguity, contract terms should err on the side of careful and concrete definitions and explanations.³¹⁵ The agreement should also have a timeline, and with several past agreements existing in excess of twenty years, including provisions for amendment and renewal is also important.³¹⁶ Most importantly, the community should be defined in the agreement.³¹⁷

Commentators have voiced the concern that corporate-community agreements allow firms to evade accountability and liability by agreeing to modest standards in exchange for community concessions that essentially waive regulatory requirements and the rights to statutory and common law claims.³¹⁸ This criticism needs to be balanced against the demands of environmental and disaster justice advocates for community empowerment and resilience.³¹⁹ These communities deserve to be respected as more than corporate dupes and instead trusted to craft agreements where each side incurs sufficient legal detriments for the contract to have consideration. Recognizing

³¹¹ EISENSEN & WEBB, *supra* note 192, *passim*.

³¹² Laura Wolf-Powers, *Community Benefits Agreements and Local Government*, 76 J. AM. PLAN. ASS'N 141, 156–57 (2010) (concluding that factors like the local development climate, role of organized labor, accountability of community coalitions, and involvement of local government influence how CBAs work in practice).

³¹³ Salkin & Lavine, *Understanding*, *supra* note 171, at 329; Kennedy, *supra* note 200, at 1092 (focuses on preserving community autonomy as “an essential precondition for an equitable distribution of burdens and benefits of a regenerative economy.”).

³¹⁴ Been, *supra* note 166, at 33–34.

³¹⁵ Stephan, *supra* note 183, at 289; *see also id.* at 303 (“[E]xperts recommend that parties include terms that are as detailed as possible.”).

³¹⁶ For a thorough review of recommended provisions and best practices, *see* EISENSEN & WEBB, *supra* note 192, *passim*.

³¹⁷ Stephan, *supra* note 183, at 308.

³¹⁸ *See* Kakade, *supra* note 17, at 376–77 (noting that communities give up rights to statutory and common law claims in exchange for money); Ochoa et al., *supra* note 245, at 1103 (criticizing the use of GNAs between wind farms and communities as tools to procure waivers and permits); Justin R. Pidot, *Fees, Expenditures, and the Takings Clause*, 41 ECOLOGY L.Q. 131, 161–62 (2014) (arguing that CBAs “may evade the limitations” of regulatory review).

³¹⁹ *See supra* Sections I(C), II(B).

that facility owners desire to avoid costly litigation and the potential for massive liability, the community should agree to forego challenges to permits (or even voice their support for them) and to waive certain claims should disaster strike.³²⁰ In return, however, the community exacts concessions like local jobs, the creation of green spaces, and perhaps most importantly improved safety and greater access to facilities and information.³²¹ With legal detriments incurred by all parties—including prescribed and proscribed business practices that reduce the possibility of disaster occurring—courts should enforce corporate-community agreements.³²²

CONCLUSION

GNAs and CBAs can never be the perfect means to mitigate all disasters that might result from business operations, particularly for mobile sources like trains that carry hazardous substances or for facilities located far from communities like offshore oil platforms. Yet the perfect should not be the enemy of the good. Numerous communities near hazardous facilities are vulnerable to disasters that can result from business operations, and current regulatory approaches offer insufficient protection. To be responsive, governmental authorities should empower these at-risk communities to procure effective corporate-community agreements because those provide an important legal tool for communities to collaborate with businesses and thereby craft their own solutions for preventing disaster.³²³

³²⁰ See *supra* text accompanying notes 201–02; Stephan, *supra* note 183, at 300 (arguing that, assuming the community waives claims that are otherwise valid, CBA provisions promising not to sue are adequate consideration); see van de Biezenbos, *Contracted*, *supra* note 13, at 619 (“[T]he avoidance of litigation stemming from the commercial activity is one of the main incentives prompting industry parties agreeing to enter contractual arrangements.”).

³²¹ See *supra* Section III(B); see, e.g., Banzhaf et al., *supra* note 285, at 199 (characterizing the creation of jobs and provision of other benefits as a form of compensation for communities); Pidot, *supra* note 318, at 161 (“[C]ommunity organizations negotiate with developers to extract concessions in exchange for their support of development projects.”).

³²² See Jeanne Marie Zokovitch Paben, *Green Power & Environmental Justice—Does Green Discriminate?*, 46 TEX. TECH L. REV. 1067, 1110 (2014) (writing that, with CBAs, “community members forego certain challenges to the business activity in exchange for the business instituting safer and more environmentally friendly operations.”).

³²³ See Jankowski, *supra* note 146, at 597–98 (calling on governments to “focus on creating incentives to self-sufficient [disaster] preparation.”).