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Founded in 2002, the nonprofit Center for Progressive Reform connects a nationwide network of scholars with policymakers and allied public interest advocates. CPR pursues a vision of legal and regulatory policies that put health, safety, and environmental protection before private interests and corporate profit. With rigorous analysis, strategic engagement in public interest campaigns, and a commitment to social welfare, CPR supports thoughtful government action, ready public access to the courts, enhanced public participation, and freer access to information.

Acknowledgments

CPR is grateful to American Association for Justice Robert L. Habush Endowment for supporting the development of this report, as well as the Bauman Foundation, the Deer Creek Foundation, and the Public Welfare Foundation for their generous support of CPR's work in general.

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Climate Justice: State Courts and the Fight for Equity

Executive Summary

Decades' worth of politicians' refusal to act on climate change, coupled with corporate bad actors' insatiable thirst for profit at the expense of human health and the environment, has guaranteed that every American family and community, now and into the future, will suffer at least some harm from a global climate catastrophe. The science is clear; the harms have begun; and they are severe and increasingly widespread. Given the scope of the damage from climate-driven wildfire, flooding, drought, and illness, litigation is inevitable, as individuals, organizations, and specific jurisdictions seek to hold industry accountable for its past and continuing behavior. Indeed, such litigation is the only way those who have suffered climate-related damage can seek recourse for loss of homes, livelihoods, health, and the death and injury of loved ones.

A growing number of victims of climate-related disasters are turning to state courts to hold corporate bad actors accountable, bringing suit against the fossil fuel producers who have caused climate change and against other corporations that have failed to adapt to its foreseeable impacts.

Increasingly, state judges and juries have the power to deliver corrective justice and promote equity for the victims of climate change.

While the plaintiffs in these matters are in court for the specific purpose of recompense, the process and outcomes of their tort litigation hold potential not just

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to compensate victims, but also to build public awareness, shift opinion, and focus pressure on lawmakers to adopt significant climate policies. In addition, when lawsuits are successful, major monetary compensation and other remedies in a judgment or settlement can impact industry conduct through deterrence and other external mandates. Indeed, compensation paid by corporations that have profited from their deception of the public and of lawmakers may shift the economic burden away from Americans whose taxes currently support public planning and recovery efforts for extreme weather and other climate-related harms. In bringing cases to state courts, climate change victims can leverage the potential of tort litigation to indirectly induce and influence climate policymaking. Tort litigation provides an opportunity for the public to learn about victims' stories, calling attention to the social inequalities exacerbated by climate impacts. Similarly, court-mediated discovery is a unique mechanism for obtaining internal

corporate records and other disclosures that can radically shift the landscape for attributing corporate misconduct to causation of harm.

Achieving these ends is particularly important when the harms – such as those attributable to climate change – are borne disproportionately by socially and economically vulnerable individuals and communities. Socioeconomic inequality has its roots in myriad policy failures, which manifest in community-wide housing inadequacies, poor infrastructure, inadequate disaster planning and response, insufficient public education, lack of high-quality job opportunities, and poverty. These problems make individuals and communities more vulnerable to climate harms and less resilient when harms befall them. For instance, residents of low-lying areas in Imperial Beach, California, and the urban heat islands of Baltimore, Maryland, face higher-than-average risks from sea-level rise and temperature increases not only because of their geographic location but also because of socioeconomic factors that have left certain parts of these cities impoverished.

These cities' residents are not alone. In fact, the U.S. Global Climate Change Research Program's 2018 National Climate Assessment describes in

exhaustive detail how limited

infrastructure resources and comparatively higher poverty rates create the conditions for disproportionate harm from climate impacts on low-income families, migrant workers, children, the elderly, tribal communities, and racial minorities in rural areas across the country.¹

As we will develop in this paper, state courts have sufficient legal grounds to hear these claims on the merits. Climate tort claims are being filed in state courts because

the federal courts have interpreted

federal environmental legislation to preclude federal common law claims. State climate torts are not preempted by the Clean Air Act, but tort plaintiffs must still meet state requirements for standing before courts will be willing to address the merits.

Unsurprisingly, special interests are working overtime to close the courthouse doors to families and communities harmed by climate change. Lawmakers and regulators may be susceptible to growing industry pressure to undermine the corrective justice potential of climate lawsuits, and the threats to climate justice are ubiquitous. These include writing climate



statutes and regulations to preempt such cases, providing immunity from liability to fossil fuel producers, and imposing other constraints, including limits on class action lawsuits, caps on damages, or restrictions on recovering attorneys' fees. To guard against these threats, Congress and state legislators must resist legislative grants of immunity and other regressive policies that limit access to state tort law for climate victims.

The insurance and reinsurance industries – and the attorneys general, regulators, and lawmakers that oversee them – play a critical role as gatekeepers, balancing liability for climate harms and imposing conditions on the insured to manage climate-related risks. By carefully managing insurance markets and policies, government regulators should also ensure that climate tort plaintiffs, should they prevail, are actually able to obtain compensation.

Lastly, the plaintiffs' bar should be a proactive advocate for state climate tort litigation and against legislative grants of immunity and other barriers. Plaintiffs' attorneys should actively engage public interest organizations with expertise in climate change or relationships with socially and economically disadvantaged climate victims for whom tort law is an indispensable instrument for compensation. Together, climate plaintiffs and their attorneys should advance opportunities to drive climate policymaking by boldly promoting their stories of climate injury and corporate misconduct.

Introduction

Over the course of the last decade, climate activists and the victims of climate change have sought to force bold government action and obtain meaningful compensation for harms through litigation. In the last few years, climate litigants have focused these efforts in state courts, following up on stunning disclosures about the extent of the fossil fuel industry's willingness to engage in irresponsible behavior in pursuit of profit.² Climate activists have scored some successes in forcing government action but not in litigation to secure compensation.³ State tort claims have significant potential to do so, but none have yet been decided on the merits.

In 2015 and 2018, journalists and researchers uncovered internal studies and communications among scientists and other staff with oil and gas giants ExxonMobil and Royal Dutch Shell (Shell).⁴ These records demonstrate in detail what critics have suspected all along: the fossil fuel industry has known for decades that their products were causing and would continue to cause global climate change, with potentially catastrophic results. Internal documents also suggest that members of the fossil fuel industry conspired

The evidence for attributing responsibility for global climate change to specific corporate actors is also robust enough to be used as evidence in litigation. The Carbon Majors project, for example, found that 100 fossil fuel producers are responsible for 71 percent of the global industrial greenhouse gas emissions over the last 30 years.

to withhold this information from lawmakers and the public while also lobbying to deregulate production and usage of fossil fuels and securing public subsidies of historic proportions. Indeed, while fossil fuel producers were publicly downplaying the climate crisis and obscuring their contributions to it – and paying millions of dollars to the campaigns of politicians supporting their do-nothing approach – producers may have used their knowledge of what was to come to adapt their operations to rising seas and worsening climate conditions.

Meanwhile, scientists have developed stronger evidence of the causal link between greenhouse gas emissions and certain sudden and slow-onset natural disasters, such as hurricanes, drought, and ocean acidification, as well as resulting harm to natural resources, economies, and human health.⁵ As well, economists and social scientists have

developed increasingly sophisticated survey and modeling techniques for quantifying climate-driven damages, and as a result, the body of scientific evidence and tools is now strong enough that judges and juries can confidently conclude that quantifiable damages have been caused by climate change. The evidence for attributing responsibility for global climate change to specific corporate actors is also robust enough to be used as evidence in litigation. The Carbon Majors project, for example, found that 100 fossil fuel producers are responsible for 71 percent of the global industrial greenhouse gas emissions over the last 30 years.⁶

The state of the science on causality, attribution, and quantification of harms from global climate change has reached an inflection point, as evidenced – in part – by the growth and diversity of climate litigation strategies and lawsuits. Recently, shareholders brought class action lawsuits against ExxonMobil in federal court in Texas for its history of intentional misrepresentations about the climate costs of carbon emissions. Attorneys General in New York State and Massachusetts have sued ExxonMobil in state

court under state securities and consumer fraud statutes.⁸ And in 2015, 21 young Americans filed a lawsuit in federal court against the executive branch of the United States government, asserting that the government's energy policies have violated the public trust by allowing greenhouse gas emissions to cause climate change.⁹

Tort law holds great potential to promote justice for people who have been harmed by corporate misconduct, especially in cases where lawmakers and regulators consistently fail to prevent harms. Nowhere is this more important than in the growing movement of state tort litigation against corporations

Through state tort actions alone, socially and economically disadvantaged individuals and communities can hold fossil fuel producers and other powerful corporations accountable for causing climate harms or for failing to respond to climate impacts. State elected officials and regulators also play a critical role in ensuring that tort law system is just and efficient by resisting regressive policies and overseeing the insurance industry and liable parties.

responsible for the harms associated with global climate change and its unmitigated impacts. This report focuses on two types of nascent climate litigation that rely on state tort law: 1) lawsuits against fossil fuel producers responsible for global climate change, and 2) lawsuits against other corporations that have failed to adapt to climate impacts. The report also focuses on the great potential of state tort law to provide compensation and relief to those climate-vulnerable communities and populations for whom certain social and economic factors increase the likelihood of both exposure to and harm from climate impacts.

Because of the vitality of state tort law and potential legal hurdles to pursuing federal common law remedies, state climate tort litigation provides a unique, and perhaps exclusive, opportunity for victims of climate change to obtain meaningful compensation – an outcome that is far less likely to result from federal litigation or to emerge from a gridlocked Congress. Through state tort actions alone, socially and economically disadvantaged individuals and communities can hold fossil fuel producers and other powerful corporations accountable for causing climate harms or for failing to respond to climate impacts. State elected officials and regulators also play a critical role in ensuring that tort law system is just and efficient by resisting regressive policies and overseeing the insurance industry and liable parties.

Climate Tort Litigation Promotes Social Equity and Corrective Justice

The social goal of corrective justice, which has ancient philosophical roots, requires that bad actors compensate people who have been harmed by their wrongdoing. The compensation must be sufficient to restore the victims, as best as is possible, to the position they would have been in but for the wrongdoer's acts or omissions. State tort law is the primary vehicle through which courts administer corrective justice in this country. State and federal administrative agencies can prevent harm from occurring in the first place, but they are largely incapable of administering corrective justice after the fact. In fact, federal environmental statutes provide no authority for the agencies that administer them to award compensation to those injured by statutory or regulatory violations.¹⁰

Decades of legal action against Big Tobacco, as well as manufacturers and users of lead-based paint, asbestos, and MTBE, present useful analogs for understanding the importance of state tort litigation in addressing the climate crisis.¹¹ Plaintiffs' repeated wins against tobacco companies induced



Congress to finally begin to address the public health crisis by authorizing the Food and Drug Administration to regulate the manufacture, distribution, and marketing of tobacco products. That effort has had important effects, but the work is far from done. Ten years on, thousands of children still begin using tobacco products each day, more than 16 million Americans live with illnesses caused by tobacco use or its second-hand effects, and, as a result, American families bear over \$300 billion in costs each year from

medical care and loss of productivity. ¹² Tort litigation against Big Tobacco continues today as federal policymakers slowly respond to ongoing harms and the similar and new public health threats posed by vaping and its marketing. ¹³

The growing climate crisis shares something else with the tobacco experience: Smoking has caused widespread and substantially disproportionate harms to socioeconomically disadvantaged communities. Tobacco usage rates are higher among vulnerable populations, including persons with disabilities and mental illness and some people of color. ¹⁴ To this day, tobacco companies disproportionately target children, low-income

people, and people of color in their marketing.¹⁵ And while usage rates between black and white Americans are similar, blacks die from tobaccorelated illnesses at a higher rate.¹⁶

Tobacco use, like climate change, is a significant factor in the health and economic disparity between low-income and wealthy Americans.¹⁷ Tobacco-related health costs and lost productivity continue to exacerbate poverty in already impoverished households through a negative feedback loop of declining health and income.¹⁸ For the comparatively wealthy, the costs of using tobacco and its health impacts are less burdensome on household finances for health care, food, housing, and other basic necessities.¹⁹

Similarly, wealthy Americans have comparatively greater access to resources that aid their adaptation to and recovery from the harms of climate change, such as flooding, extreme heat, and food scarcity, than low-income and marginalized households, creating conditions that deepen already historic levels of domestic and global wealth inequality. Government inaction, corporate negligence and malfeasance, and social and economic inequality are all factors in these outcomes. Despite their social and economic disadvantages in these circumstances, and because policymakers have largely failed to take meaningful action to defend them, individuals and communities have turned increasingly to state tort law to redress harms and to hold corporations accountable for their actions.

State tort litigation offers a unique and indispensable opportunity for the low-income and marginalized victims of climate change and corporate misconduct who are unlikely to be able to protect their interests in the political process because they lack clout. In state courts, the politically disempowered can pursue justice while also amplifying their voices in the public debate on climate policy. State tort claims can trigger compensation for climate injuries, including the costs associated with disproportionate exposures and harms to disadvantaged plaintiffs, that federal legislation in all likelihood would never deliver and which these victims desperately need.

Climate Damages: Those Harmed and The Perpetrators

The U.S. Global Climate Change Program's 2018 National Climate Assessment confirms that extreme weather and other present-day impacts of global climate change will exacerbate the already worsening crises facing our country: failing infrastructure, diminishing and degraded natural resources, and widening economic inequality. A critical finding of the report is that socioeconomically marginalized communities and certain vulnerable populations, like children and the elderly, are increasingly at risk from climate impacts that cause disproportionately greater harm to these groups.²¹ Not coincidentally, these groups bear the least amount of responsibility for contributing to climate change.

Climate Change Continues to Generate Harmful Environmental Changes

Environmental and climate conditions have already changed dramatically as a result of human activities and are projected to worsen in the coming

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decades.²² Average annual air temperatures are rising at an accelerated pace nationally, and heat waves are projected to occur with greater intensity and frequency in the next several decades.²³ Changes in the timing, intensity, frequency, and quantity of rain and snowfall vary by geography but are no less severe.²⁴ The average precipitation in western and southern states, for example, has decreased, while the northeastern states have experience heavier precipitation.²⁵ Extreme precipitation events are expected to continue increasing in frequency and intensity nationwide, while snowfall is expected to continue to decline.²⁶ The frequency and intensity of hurricanes are also expected to increase in the Pacific and Atlantic oceans.²⁷ Finally, sea

levels are expected to rise another half foot in the next ten years, and possibly eight or more feet by $2100.^{28}$

These conditions will bring ever greater harm to more and more communities throughout the country. Nuisance or "sunny-day" flooding has increased significantly over the last 50 years and is projected to increase at an accelerated rate.²⁹ Flooding from extreme weather and sea-level rise is also expected to rise dramatically, as hurricanes become more intense and the largest storms become more frequent.³⁰ Scientists have connected certain extreme weather events – for example, Hurricane Harvey – and their characteristics to climate change.³¹ There will be more chronic drought, increasing the potential for serious water shortages later this century, and there will be even more large wildfires.³²

Climate change will also amplify existing health threats and create new ones, especially among already vulnerable Americans.³³ With rising air temperatures and a greater number of extreme heat days, heat stress is expected to cause more injuries, illnesses, and deaths, especially within urban areas that suffer from the "heat island" effect.³⁴ Elderly and low-income households that cannot afford air conditioning could suffer more and worse health outcomes as a result. Diseases previously limited to certain tropical and sub-tropical zones are expected to spread as environmental

conditions change. For example, the incidence of the mosquito-borne West Nile virus is expected to double by 2050.³⁵ Individuals without health insurance, a group that is disproportionately poor and in which people of color are overrepresented, may therefore be less likely to receive adequate treatment for climate-driven disease. Climate impacts such as flooding and worsening air quality also have the potential to generate, mobilize, and exacerbate hazardous pollution from industrial and naturally



occurring sources. Poor communities and communities of color are already more likely to live near sources of industrial pollution and suffer harm as a result, which will only be exacerbated by climate-driven pollution episodes like flood-induced chemical disasters.³⁶ Strikingly, these harms do not occur predictably or in isolation but rather can form positive feedback loops or cascades of additional harms, further increasing risks to families and communities.

The Disproportionate Harm Suffered by the Least Powerful

Researchers and policymakers have identified certain populations and communities that are among the most vulnerable to climate change broadly and to certain climate impacts and harms more specifically – for example, a household that is located in a flood- or wildfire-prone area. These populations and communities – indigenous, people of color, and other socially and economically disadvantaged groups – are also the least responsible for contributing to global climate change, the delay in taking measures to mitigate climate change, and the lack of urgency to adapt to its already significant impacts.

There are a number of sociological factors that influence the vulnerability of individuals or communities to climate impacts. Certain populations are particularly susceptible to the risk of exposure and of harm from climate impacts because of underlying physical and mental conditions. Children, the elderly, the disabled, and individuals with chronic medical conditions are most at risk from environmental harms and disasters. When these groups

experience other preexisting socioeconomic stressors, such as poverty, inadequate housing, or language barriers, they may be even more susceptible to harm from climate change.

Some workers are particularly climate vulnerable. Agricultural and construction workers who toil outdoors are more vulnerable to heat stress.³⁷ Employees who work for companies that have failed to adapt to climate change are also at greater risk.³⁸ Potential harms are increased by additional factors, such as socioeconomic status, preexisting illness or disability, and ineffective enforcement, rollbacks, and gaps in regulatory safeguards for occupational safety.

Homeowners and renters in impoverished and marginalized communities are likewise more vulnerable to climate harms. Low-income homeowners have most of their personal wealth invested in their homes, and so are particularly vulnerable to economic harm if those homes are damaged or destroyed by climate-driven flooding and wildfires or devalued because of the risk of climate harms. When low-income homeowners are displaced, permanently or temporarily, because of climate impacts, they will not have the resources to obtain safe housing alternatives, particularly if they are unable to sell their homes because of climate risks or damages. Renters are also vulnerable to climate-driven displacement, and low-income tenants are likely to be priced out of rentals as wealthier climate victims forced from their homes seek housing. Tenants are at a comparative power disadvantage when they seek redress for climate-induced housing damages and deficiencies, such as inadequate flood protections or air conditioning.

Individual businesses and business sectors may also be particularly vulnerable to climate harms. Small business owners, in general, have comparatively fewer resources to prepare for and recover from climate impacts than larger companies, including harms caused by another company's failure to adapt to climate change. Some small business owners are also more vulnerable because of their own socioeconomic characteristics, including their English language proficiency, immigration status, or race. Certain sectors, especially small-scale and subsistence agriculture and fisheries, are also more dependent than others on stable or predictable climate and environmental conditions. Smaller businesses that are vulnerable to climate impacts may have difficulty accessing government resources, especially by comparison to larger, corporate entities that have comparatively more power and capability to lobby for and access government assistance and policy response.

The economic costs of climate change will be pervasive and unprecedented in scale. Many local and state governments already struggle to fund and administer existing programs and infrastructure, especially in economically depressed or marginalized regions, and climate-related costs are likely to rise into the hundreds of billions of dollars.

The Perpetrators: Fossil Fuel and Non-Adapting Companies

As the impact of climate change continue to unfold around us, the companies subject to tort litigation fall into two broad categories. First are the dozens of corporations like ExxonMobil, Chevron, Shell, and British Petroleum (BP) – fossil fuel companies that have always loomed large in public discussions about climate change and whether its perpetrators can be held legally responsible for its costs. Second is the broader universe of defendants: industrial facilities have come under scrutiny for their failure to adapt their operations to reasonably foreseeable harms induced or driven by climate change, resulting in profound harm, particularly to economically disadvantaged communities.

For decades, the fossil fuel industry has relied on lobbying, campaign donations, and a coordinated campaign of disinformation not simply to defeat legislation that would force them to behave more responsibly, but to obtain public subsidies for climate-change-inducing practices. In this effort, they have relied on the difficulty in attributing specific weather events or other climate-induced impacts to their particular contributions to climate change, and they have encouraged Americans to ignore the overwhelming weight of the scientific evidence, in much the same way that tobacco companies relied for years on a strategy of raising doubts by making arguments that were rhetorically colorable but scientifically wrong.³⁹ But

these companies' responsibility for climate change and its impacts can no longer be obscured by such tactics. Increasingly, scientists are able to attribute the majority of greenhouse gas emissions to specific coal, oil, gas, and concrete producers and distributors.

One study identified 90 fossil fuel producers responsible for nearly two-thirds of historic and recent greenhouse gas emissions.⁴⁰ The researchers determined that these companies are responsible for about 43 percent of the rise in atmospheric carbon dioxide, 29 to 35 percent of the rise of global

average surface temperatures, and 11 to 14 percent of the rise of global sea levels between 1980 and 2010.41

Industry has relied on the difficulty in attributing specific weather events or other climate-induced impacts to their particular contributions to climate change, and they have encouraged *Americans to ignore the* overwhelming weight of the scientific evidence, in much the same way as tobacco companies.

These companies have long known about these consequences because their own scientists told them. Internal documents and studies reveal that Exxon knew by the late 1970s – at the very latest – that its business model was responsible for climate change and its catastrophic consequences. 42 In the intervening decades, Exxon and other major producers doubled down on efforts to mislead the public, fund political allies, promote climate denialism, and accelerate production of polluting fossil fuels in spite of the companies'

own public commitments to the contrary.⁴³ Today, many of these corporations continue efforts to block meaningful action on climate change.

Moreover, because climate change and its impacts have been known for a considerable time, across a range of industries, a variety of other corporate actors that have refused to adapt their operations to known or foreseeable

climate impacts may be held liable



for climate-driven injuries to other businesses, public infrastructure, or private citizens. The U.S. chemical industry, for example, accounts for a large number of facilities on coastlines that are vulnerable to sea level rise and other forms of climate-driven flooding, but not all companies are using public information about flood risk to adapt their operations to prevent potentially catastrophic disasters.44 As in the Arkema chemical factory case study described further below, fenceline

communities may increasingly seek to hold corporations accountable for their negligent, even reckless, acts and omissions that result in flood-driven chemical disasters and off-site pollution.

Four Case Studies: How Climate Victims Are Seeking Justice Through Tort Law

State climate tort lawsuits are still in the early stages of the legal process. Most are still in federal district and appellate courts pending rulings on removal from the state courts where cities, counties, and others initially filed their complaints. Defendants in state climate lawsuits uniformly attempt to argue that climate change presents inherently federal issues that entitle them to remove the litigation to federal court. As a result of ongoing battles over jurisdiction, courts have yet to hold evidentiary hearings that provide insight into how plaintiffs will substantiate their allegations of causation, attribution, and quantification of damages and how those claims will be treated by state courts. However, the complaints alone in these cases illustrate a high level of sophistication in marshalling the robust scientific information that plaintiffs are relying on to substantiate causation, attribution, and quantification of damages.

In addition, the complaints provide an early indication of the diverse and broad landscape of prospective climate tort plaintiffs. The field of climate tort litigants is not limited only to those who have suffered direct economic losses or physical injuries from climate impacts or failures to adapt to climate change. Several of the pending lawsuits have been brought by and on behalf of socially and economically vulnerable populations and communities that face disproportionate harms from climate impacts. This section examines four case studies:

- A case study examining the lawsuit brought on behalf of cottageindustry fishermen against the fossil fuel industry for closures and contamination of one of the West Coast's most lucrative and sustainable fisheries;
- Two case studies concerning lawsuits filed by climate-vulnerable cities (Baltimore, Maryland, and Imperial Beach, California) whose residents already face substantial social, economic, and environmental challenges; and
- A case study of several tort lawsuits filed by residents of fenceline communities and first responders seeking compensation from a chemical manufacturer whose failure to adapt to flood risk resulted in a chemical disaster during and after Hurricane Harvey.

Pacific Coast Federation of Fishermen's Associations v. Chevron Corp., et al

Coastal fishermen and oceanographers in the Pacific Northwest know 2015 as the year of the Blob. But this nickname for the mass of heated ocean water observed over several years in the North Pacific belies the serious impacts of the unprecedented episode. The sustained, above-average water temperatures caused one of the largest and most persistent blooms of toxic algae on record, affecting hundreds of miles of coastal waters in Oregon, Washington, and northern California.⁴⁵

Domoic acid, a potent neurotoxin produced by such algal blooms that persist in marine sediments, pervaded shellfish along the coast, prompting state managers to close recreational and commercial fisheries for weeks and, in some cases, the entire season. ⁴⁶ Along with partial and full-season closures of anchovy, sardine, rock crab, and razor clam fisheries, Oregon and California were also forced to close the lucrative Dungeness crab fisheries for the remaining months of the season. ⁴⁷ According to the Fisheries of the

Sustained, above-average water temperatures caused one of the largest and most persistent blooms of toxic algae on record, affecting hundreds of miles of coastal waters in Oregon, Washington, and northern California.

United States Report for 2015, landings of Dungeness crabs declined 56 percent nationally over the previous year, with declines of 22 percent in Washington, 83 percent in California, and 81 percent in Oregon.

According to the report, the nationwide Dungeness crab fishery lost at least \$97.5 million in revenue over the previous year as a result.⁴⁸ The federal government responded by declaring a federal fisheries disaster.

These closures were not an aberration. Closures due to marine heatwaves and the resulting persistent toxic algal blooms continued into 2016, 2017, and 2018. The Pacific

Coast Federation of Fishermen's Association (PCFFA), the largest commercial fishing association on the West Coast, alleges that the climate-driven algal blooms have caused some of its members to abandon the Dungeness fishery, which the association estimates to be worth \$445 million.⁴⁹

The Dungeness fishery in California, Washington, and Oregon, which is comanaged with several treaty tribes and the Northwest Indian Fisheries Commission, largely supports family-owned and cottage-industry businesses that operate individual or small fleets of boats. The PCFFA suggests that the fishery sustains thousands of jobs for crabbers and thousands more jobs in local communities for purchasing and processing the crabs. ⁵⁰ In one California study, researchers found that a majority of crabbers had been employed in the fishery for decades, and almost three-quarters derived more than 40 percent of their annual income from the fishery. ⁵¹

The disruption of the Dungeness fisheries does not just affect the annual income for small business owners, crabbers, and the communities in which they live, it threatens their way of life. The typical Dungeness crabbing operation consists of a captain and two crewmembers. When the fisheries are temporarily and unexpectedly closed by domoic acid contamination,

crewmembers cannot easily find other temporary employment locally and may have to travel long distances to work.52 Captains have held community fish fry fundraisers to support crew members during closures. The regular fleet of small-scale crabbers that support the fabric of local communities are comparatively more vulnerable to the economic impacts of algae blooms than the few corporate fishing fleets that sell directly to major nationwide wholesalers.



In November 2018, PCFFA filed a complaint in California state court on behalf of its members who participate in the California and Oregon Dungeness crab fisheries. ⁵³ The PCFFA complaint alleges that fossil fuel companies, which include dozens of named corporate entities associated with ExxonMobil, Shell, BP, Chevron, and other multinationals, caused past and future harm to the Dungeness fishermen and industry. The complaint focuses on the companies' decades-long conduct of producing and marketing fossil fuel products and conspiring to conceal their knowledge of the likelihood of climate change and its impacts while also promoting misinformation and campaigning for deregulation. PCFFA presents specific state claims of nuisance, strict liability for failure to warn, strict liability for design defect, negligence, and negligent failure to warn, and the association is seeking unspecified compensatory and punitive damages, disgorgement of profits, and equitable relief, among other things.

PCFFA describes a number of harms to its members that it alleges have or will occur because of the fossil fuel companies' conduct. These include lost fishing opportunity, the hundreds of crabbers who were prevented from working the Dungeness fisheries because of historic delays and closures and, as a result of the disrupted timing, the subsequent lost opportunity to fish other species. Further, PCFFA cites a scientific study that projects increased fishery closures due to toxic algal blooms.⁵⁴

Beyond past and current harms, the complaint predicts as-yet unquantified economic losses to crabbers, buyers, wholesalers, marketers, processers, and

other members of the Dungeness economy because of fisheries closures and a depressed market value of crab harvests due to the stigma of domoic acid contamination. PCFFA predicts the crisis will continue to divert its own resources away from other priorities and that the lifestyle and culture attributable to the Dungeness commercial fisheries community and the larger region will diminish over time.

The PCFFA lawsuit is far from the first time that small-scale fisheries and vulnerable subsistence fishers have looked to state courts to provide compensation from damages caused by the oil and gas industries.⁵⁵ And it won't be the last: Dungeness crab and other Northwest fisheries are not the only ones at risk of failure due to warming water temperatures, algal blooms, and other climate impacts.⁵⁶ As food insecurity is worsened by chronic conditions and extreme events driven by climate change, other affected agricultural sectors are likely to look beyond federal disaster aid and towards parties potential liable for the climate conditions responsible for losses year after year.

City of Baltimore v. BP, et al.

In the last two years, a number of cities, counties, and states have filed lawsuits against the fossil fuel industry seeking compensation and other remedies on behalf of their residents, who face the dual burden of suffering climate harms and paying for the ballooning costs of climate adaptation for public services and infrastructure. In some cases, state and local governments are motivated, in part, by the disproportionate impact that climate will have on their most socially and economically disadvantaged residents, for whom public services are especially critical.

The earliest lawsuits, as well as the majority of government climate tort plaintiffs, are located in California and among the participating cities and counties are Oakland, San Francisco, and Imperial Beach. However, these cases are not limited to West Coast jurisdictions. The Niskanen Center has partnered with Earthrights International and a local law firm in filing suit against two fossil fuel producers, ExxonMobil and Suncor Energy, on behalf of Colorado's Boulder County, San Miguel County, and the City of Boulder. On the East



Coast, the City of Baltimore and the State of Rhode Island are among the spate of state and local climate tort plaintiffs.

The City of Baltimore filed a complaint in Maryland state court in July 2018 against 26 fossil fuel companies. The complaint includes seven causes of action, including strict liability, negligence, nuisance, and trespass claims, as well as a claim made under a Maryland consumer protection statute. Despite industry efforts to move the case onto the federal docket, in June 2019, a federal district court in Maryland ruled that the case belonged in state court, concluding there was no federal jurisdiction. In late October 2019, the Supreme Court rejected the defendants' petition for an emergency stay, setting the state court proceedings into motion, while a separate appeal will be taken up by the 4th Circuit by year's end.

Baltimore's complaint specifically focuses on how climate impacts, such as worsening flooding and heat waves, will harm public health – harms that are likely to be "disproportionately borne by communities made vulnerable by their geographic location, and by racial and income disparities." ⁵⁷ Baltimore alleges that more than 17 feet of projected sea level rise, increased intensity of precipitation, and tropical storms – and interactions among these factors – will cause erosion, saltwater intrusion into groundwater, public and private

property damage, and "pollution associated with damaged wastewater infrastructure" throughout the city and its 60 miles of coastline. Baltimore cites the potential for climate impacts to worsen wastewater overflows, which result in contamination of public waterways and private property, as it struggles to remediate failing sewage infrastructure under a federal Clean Water Act consent decree.

Workers, low-income subsistence fishermen, and medically vulnerable populations are exposed to hazardous substances and waterborne pathogens because of wastewater contamination of the city's harbor.⁵⁹ People of color and low-income households, which include children and elderly populations, are exposed to storm-induced backups of wastewater.⁶⁰ Low-income households are also at a disadvantage in terms of accessing and affording adequate and timely remediation of contamination and

Various studies suggest poverty and other indicators of social vulnerability are associated with disproportionate exposure to urban heat islands and air pollution in Baltimore and other cities.

medical care when their exposure to contaminated wastewater makes them sick.⁶¹ While Baltimore does not describe its consent decree mandates in its complaint, the city is also facing the burden of potentially paying millions of dollars in federal penalties for wastewater overflows that are in part driven by climate impacts.

Baltimore's complaint also highlights the public costs of preparing for and delivering services related to human health impacts of increased air temperatures and heatwaves. The frequency of extremely hot days will triple

by 2050, and the annual average temperature will increase by 12 degrees Fahrenheit in the city.⁶² The risk of heat stress, especially to "medically fragile, chronically ill, and otherwise vulnerable" populations, has increased 43 percent in Baltimore (compared to only 11 percent statewide) over a 12-year period.⁶³ The risk of hospitalization for asthma attacks driven by extreme heat and poor air quality increased 37 percent over the same period.⁶⁴ Various studies suggest poverty and other indicators of social vulnerability are associated with disproportionate exposure to urban heat islands and air pollution in Baltimore and other cities.⁶⁵

City of Imperial Beach v. Chevron Corp, et al

The City of Imperial Beach is a blue-collar surfing town of 26,000 surrounded by water on three sides, including the Tijuana River along the border with Mexico.⁶⁶ Sea level rise from climate change is a mounting threat to the city. Adaptation measures like sea walls could cost the city 250 percent of its current annual operating budget, which at \$19 million per year makes Imperial Beach the poorest jurisdiction in San Diego County with one of the

smallest operating budgets among all

cities statewide.67

Projections are that by 2100, roughly a third of the city, including public schools, could be destroyed by erosion and flooding driven by sea level rise alone; this includes more than 2,000 homes, businesses, and open spaces, as well as miles of roadways, sewer lines, and other critical infrastructure.68 The flooding is also likely to disrupt the local surfing and beach tourism industry.⁶⁹ As in Baltimore, city leaders are concerned about the climate-driven



threat of toxic floodwaters because nearby military installations and other industrial facilities store hazardous chemicals that are vulnerable to sea level rise.70

While waters rise in Imperial Beach, the cost of living is also increasing due to economic and population growth in San Diego County. One in four city residents lives below the federal poverty line, and because of a higher-thanaverage cost of living, more than half of them struggle to make ends meet.⁷¹ With high income inequality, economically disadvantaged residents may struggle to relocate in response to climate impacts.

Imperial Beach filed its complaint in state courts in July 2017, bring claims against dozens of fossil fuel producers for public nuisance, trespass, and negligence, among other causes of action.⁷² Two years later, the city's suit has been consolidated with lawsuits filed by five other California cities and counties. The U.S. Court of Appeals for the 9th Circuit will soon consider whether the state tort claims should be sent back to state courts or remain at the federal level.

Residents and First Responders v. Arkema

In August 2017, Hurricane Harvey dumped 50 inches of rain on the Houston region.⁷³ The Arkema chemical plant, located in the unincorporated community of Crosby, Texas, was quickly flooded during the deluge. Plant workers attempting to secure storage of volatile chemicals were directed to evacuate. The backup generators that powered the refrigeration units containing toxic chemicals were swamped. As the refrigeration failed in the sweltering summer heat, the chemicals ignited, sending black plumes of smoke into the sky.

Police officers manning the one-and-a-half-mile wide evacuation cordon around the chemical plant were overcome by the toxic fumes, doubling over and vomiting along the roadway.⁷⁴ Emergency medical personnel called to respond to the scene felt the violent effects before they even left their vehicles. All the while, and for days afterwards as plant operators ignited the remaining toxic chemicals in-place for disposal, toxic contamination continued to rain down on homes and public spaces in the surrounding community of Crosby, both within and outside of the evacuation zone. Hundreds of Crosby residents reported experiencing the ill effects of the toxic fumes, including persistent respiratory distress, headaches, nausea, dizziness, and pneumonia.

The Crosby plant was not prepared for the flooding from Harvey and resulting risk of chemical disaster, but there are significant indications that it should have been. Federal risk management regulations did not require



planning for the extent of flooding caused by Harvey or the particular chemicals that were released during the incident.⁷⁵ However, the facility's entire footprint was located in flood zones designated by the federal government in the 10 years prior to the incident, and Arkema's own insurer identified the risk of flooding in the year prior, as well. 76 Indeed, the facility had already flooded several times during past hurricanes and other storms, even before the federal flood risk designation for the site.77

The Crosby facility also had a history of chemical disasters, safety violations, and injuries to neighboring residents in the years prior: a little girl burned by a sulfuric acid release, chemical explosions and fires involving the same class of chemicals involved in the Harvey disaster, and more recent violations of

chemical storage and occupational safety regulations.⁷⁸ Despite these incidents and increasing risk, the facility's emergency response plan did little to account for major flood events, and the owner did not harden

infrastructure, including key power facilities, to

withstand flooding.⁷⁹

Arkema has faced a wave of litigation following the flood-induced chemical disaster. Weeks after the disaster, Harris County brought suit against Arkema seeking to enforce violations of state air, water, and floodplain regulations.80 The county also brought additional criminal indictments against the company, its CEO, and the plant manager the following year.81 In addition, hundreds of injured victims have filed suit against Arkema in the wake of the disaster. Seven first responders filed a negligence lawsuit against Arkema just a few days after the plant operators had ignited remaining chemicals, causing contamination to continue in and around Crosby. The plaintiffs allege that Arkema was negligent in "failing to prepare" by adequately and accurately informing the public about the

The plaintiffs allege that Arkema was negligent in "failing to prepare" by adequately and accurately informing the public about the risks of the hazardous chemicals and contamination, *in failing to safely store* chemicals, establish response procedures, prepare backup systems, and, ultimately, responding to the known, foreseeable risk of major flooding.

risks of the hazardous chemicals and contamination, in failing to safely store chemicals, establish response procedures, prepare backup systems, and, ultimately, responding to the known, foreseeable risk of major flooding. A class action lawsuit by affected residents is proceeding through the pretrial process in a federal court.82

A Rising Tide: Tort Litigation and Climate Action

At least in part due to the lobbying and campaign contributions of the very companies that have fueled the climate crisis, federal efforts to mitigate and adapt to climate change have made little progress. Congress has failed to adopt significant climate legislation, and much of the progress made by the Obama administration has been undone by the Trump administration. After years of federal failure, state climate litigation, though brought for the purpose of securing compensation for damages suffered, could have an additional benefit outside the courtroom: informing and shaping federal climate policy through the disclosure of internal corporate documents obtained via the discovery process and swaying public opinion by putting a human face on the harms of climate change. Similar to the litigation against tobacco companies in the 1980s and '90s, climate tort litigation could reshape public perception of the issue, changing the political dynamic for a Congress that has so far been unable to deliver meaningful climate legislation and encouraging corporate actors to mitigate and adapt to climate impacts.

For decades, the federal executive and legislative branches have failed to implement policies to mitigate the now-accelerating threat of climate

After years of federal failure, state climate tort litigants have a unique opportunity to induce and inform federal climate policymaking with successful cases, obtain new disclosures of internal corporate documents through the discovery process, and sway public opinion by telling their stories in legal pleadings, in courtroom trials, and in the press.

change. Congress has, at best, maintained the status quo of inaction over periods of both Democratic and Republican control, and it has failed to curtail greenhouse gas emissions and require climate adaptation. Taken together, even Obama-era policies fell far short of what is needed to mitigate climate change and prevent worsening climate harms. Now, the Trump administration's rollbacks of the Clean Power Plan and dozens of other environmental rules are further exacerbating climate and other pollution harms. One chamber of Congress, the House of Representatives, is now working its way toward legislation following intensive investigations by the House Select Committee on the Climate Crisis and numerous standing committees, but questions persist

about whether action will come soon enough or go far enough to mitigate climate catastrophe, and perhaps more significantly, about whether the Senate will take up any legislation the House adopts.

Here again, the experience with tobacco offers insights. In the 1960s, while tobacco products were not federally regulated, the Surgeon General began to publicize the health risks associated with its use.⁸⁵ The use of tobacco by minors had been restricted by state laws, but the regulatory effort was not entirely effective. By the late 1980s, state tort litigants succeeded in obtaining internal tobacco company documents showing that the industry

was well aware of the addictive properties of nicotine and the health risks of tobacco use, and that companies conspired to hide this information from regulators and the public. In the following decade, these disclosures gave way to congressional hearings and coordinated litigation by states against tobacco manufacturers, which produced some of the first limits on

advertising and marketing of tobacco products. After the Supreme Court struck down a tobacco marketing rule in 2000, Congress was driven by public pressure to pass the first federal legislation authorizing FDA regulation of tobacco products in 2009.

Of course, the purpose of the litigation is to secure direct benefits. Indeed, successful claims could produce much-needed compensation for affected communities, paid for by fossil fuel companies and corporations that fail to adapt to climate impacts. In failure-to-adapt lawsuits, judgments or settlement agreements may also



secure measures that require companies to take steps to prevent future harms related to the impacts of climate change on their operations and facilities. Through court-enforced equitable remedies, including, for example, continuous monitoring of climate impacts or implementation of technologies that mitigate climate harms to plaintiffs, tort can serve as an exceedingly efficient and desirable mechanism for private regulation of especially complex and emergent risks.⁸⁶

Successful litigation could also produce indirect and deterrence outcomes. Large payouts by fossil fuel producers could make fossil fuel use more expensive and incentivize energy companies to invest in carbon capture and carbon-neutral technologies. Large payouts by corporate actors that fail to adapt to climate change could serve as a deterrent to other actors, driving private investment in adaptation and related mandates by insurers.

Like state tort litigation against tobacco producers, even unsuccessful climate tort litigation holds the potential to inform climate policymaking through the discovery and trial process. As with the internal documents produced in the tobacco litigation of the 1980s, the internal Exxon studies, communications, and other records made public in 2015 have provided a substantial amount of revealing information that has served to inspire climate tort litigation and has educated the public. However, an additional universe of information about corporate misconduct and malfeasance by fossil fuel producers and other actors could be disclosed through the discovery process. Additional documentation about the efforts by fossil fuel producers, for example, to mislead the public and regulators could undermine the credibility of vested interests fighting against climate change policymaking. Moreover, tort litigation has the potential to unveil

information about the causation and attribution of climate harms previously communicated only to fossil fuel producers in internal documents and communications. Ultimately, mounting public disclosures about corporate malfeasance hold the potential to make Congress' longstanding inaction on climate legislation an untenable political position.

Between new disclosures resulting from discovery and news coverage of climate victims and their lawsuits, climate tort litigation can promote public awareness and sway public opinion that drives meaningful state and federal policymaking. Indeed, tort law offers far more than compensation and deterrence. Tort functions, in part, as a invaluable component of the larger system of public and private regulatory controls.⁸⁷ Tort litigation can spotlight previously underappreciated or unknown communities and populations harmed by climate impacts and failures to adapt. Plaintiffs' stories can also influence public opinion and amplify public pressure on legislators to take action to address climate change while also educating the public and encouraging societal behaviors that help reduce the harms associated with climate change.

Promoting Corrective Justice by Guarding Against Immunity and Tort 'Reform'

Potential climate tort claimants – workers, small business owners, cities, and climate-vulnerable communities of all types – and those who support climate justice should be greatly concerned about the potential for legislators to restrict these types of cases. Statutory preemption, grants of immunity, and restrictions on damages and class action lawsuits are just some of the threats against climate justice litigation.

Congress has not enacted legislation either expressly preempting tort claims or providing grants of immunity to the fossil fuel industry. Indeed, the Clean Air Act explicitly preserves state common law remedies. 88 However, the industry and its supporters will undoubtedly push for statutory immunity as Congress slowly advances toward climate lawmaking. The fossil fuel industry may also lobby Congress to mandate federal jurisdiction over state climate tort claims, which would greatly disadvantage plaintiffs whose claims are based in state law and possibly lack requirements for diversity jurisdiction. 89 Therefore, it is absolutely necessary to oppose such immunity in order to

preserve state tort law's ability to provide corrective justice.

Democrats and Republicans in Congress are pushing legislation that would put a fee or tax on carbon emissions. These legislative proposals are backed by influential forces from industry and environmental organizations, but progress is stalled at present because of the upcoming presidential election. 90 If political calculations change in the years ahead, and a carbon tax



becomes the consensus approach to climate legislation, then a key point of the legislative debate and negotiations will be the extent of immunity granted to climate tort defendants. While Congress has largely avoided preempting state tort claims in other environmental contexts, lawmakers may yet succumb to industry lobbying by passing climate legislation that includes preemption provisions or grants of partial or complete immunity to corporate polluters or corporate entities that fail to adapt to climate impacts. 91 And there are indications that fossil fuel producers are counting

on the increasing public support for carbon tax legislation as a vehicle to stymie tort litigants.

Congress exercises its constitutional authority to preempt state regulatory control in narrow and specific contexts. ⁹² However, in the case of environmental regulation, it has largely eschewed preemption of state tort litigation for critical reasons. Legislators continue to recognize that state tort litigation reflects the exercise of the states' historic police powers that warrants protection. Congress also recognizes that controls required by federal agencies alone may not be sufficient to prevent harms. Furthermore, it has not generally regarded regulatory laws as an appropriate mechanism or substitute for compensation for harms.

As described in the Center for Progressive Reform's 2018 *Civil Justice in the United States* report, some state and federal lawmakers are pursuing a number of legislative attacks on tort law that would bar injured plaintiffs from effective access to the judicial system, dividing and minimizing the collective power of otherwise marginalized plaintiffs, and shifting the burden of corporate negligence and malfeasance onto victims and society at large.⁹³ State and federal legislative proposals for forced arbitration impose

constraints on victims of tortious conduct that are often

Legislators continue to recognize that state tort litigation reflects the exercise of the states' historic police powers that warrants protection. Congress also recognizes that controls required by federal agencies alone may not be sufficient to prevent harms.

burdensome for potential plaintiffs to initiate, unfavorably secretive, and lack procedural safeguards. Forced arbitration may become a relevant threat to potential plaintiffs who seek compensation from a contractual party's failure to adapt to climate impacts. These proposals present an especially potent threat to poor and marginalized people and communities with few resources to obtain legal representation and support litigation. Climate plaintiffs may also be barred from the judicial process through legislation that imposes intensified standards for pleadings or arbitrarily narrows statutes of limitations.

Economically and socially disadvantaged climate victims are also threatened by the prospect of legislative proposals to bar class action lawsuits, given the potential cost required to establish the theories of causation and attribution inherent in climate change and failure-to-adapt cases. Prospective individual plaintiffs face a dual challenge of having far fewer economic resources – for document review and expert witnesses, for example – than corporate defendants and wield little or no control over relevant records and information that are likely to be in the defendants' custody. Indeed, the cases against corporate defendants for asbestos, lead, tobacco, and other harmful products and related misconduct have been successful because plaintiffs were able to bring class-action lawsuits.

Proposals for capping damages represent another substantial threat to all tort plaintiffs, especially socioeconomically disadvantaged people and communities that may lack access to other forms of compensation or assistance. Arbitrary caps on damages have the potential to disincentivize plaintiffs from filing claims, putting just compensation out of reach. In doing so, these caps also incentivize corporate actors to continue their negligent and reckless conduct.

Barriers to Climate Tort Plaintiffs

Plaintiffs have filed a number of state common law claims, such as nuisance, strict liability for failure to warn, strict liability for product defectiveness, negligence, and negligent failure to warn, among others. Whether or not a court will hear their cases on the merits, however, depends on a number of legal doctrines that could be a barrier to climate change lawsuits. These doctrines are not insurmountable, however. Plaintiffs in many cases will be able to present sufficient evidence to survive summary judgment and have the merits of their claims decided by a jury.

In general, plaintiffs will likely need to overcome three legal doctrines that corporate defendants are certain to raise as defenses. First, climate tort



plaintiffs will need to establish that their lawsuit is not preempted by federal law. Second, defendants will challenge plaintiffs' standing. All plaintiffs must have standing, which may be particularly troublesome for climate change plaintiffs since, in many cases, they need to establish a concrete injury that they have suffered that is traceable to the defendant's conduct. Third, related to standing, courts might also refuse to hear these lawsuits because of the "political question" doctrine. The federal political question doctrine

holds that certain remedies inherently and fundamentally impinge upon the authority granted to the political branches of government, such as executive discretion in military matters and impeachment of political officers.

With regard to preemption, state courts are not likely to rule that the Clean Air Act preempts state climate tort lawsuits. The Act makes clear that it does not preempt state common law remedies in its general savings clause, which preserves state authority inclusive of state common law. 94 Nevertheless, in American Electric Power Co. v. Connecticut, the U.S. Supreme Court held that Congress had authorized regulation of greenhouse gas emissions through the Clean Air Act and, as a result, displaced the federal common law of interstate pollution. 95 In Kivalina v. ExxonMobil Corp., the 9th Circuit (cert. denied) held that displacement of federal common law includes all remedies, including compensation for damages, for federal nuisance claims related to climate change. 96 Although the Supreme Court held that federal common law claims are displaced, the Court has made clear that the American Electric Power Co. ruling does not impact state tort claims, even if

they are presented in federal court, by dismissing the federal common law claims without prejudice to refile the state claims in federal court.

State courts should also reject arguments that the Clean Air Act impliedly preempts state tort claims because state tort law does not conflict with the purposes of the Act. The purpose of the Clean Air Act to enhance air quality is not frustrated by claims for compensation for negligence, nuisance, or trespass, and an injunction to abate alleged nuisance would complement the Act's goals.⁹⁷ The Clean Air Act also does not preempt state tort law because Congress clearly did not intend to occupy the field of air pollution control to the exclusion of state law.⁹⁸ Indeed, the Act assigns powerful implementation and enforcement roles to the states.

In addition, climate tort litigants must also overcome the hurdle of state standing doctrine before their claims may be heard on the merits. In federal courts, Article III limits on standing require plaintiffs to allege a "concrete and particularized" injury, traceability, and redressability. However, state courts are not bound by Article III's strict limits on standing, which serve to check and balance the authorities of Congress and the executive branch to make and enforce the law with that of the judiciary's role to interpret it.⁹⁹

Many states adopt aspects of federal standing doctrine, but state standing doctrine and its application varies from state to state. 100 Therefore, individual climate tort plaintiffs may face challenges in meeting standing requirements in some state courts that they would not in others. For example, some states require plaintiffs to show that their alleged injuries are different or greater than other members of the general public.¹⁰¹ This requirement could be a weakness for some potential plaintiffs and even those individuals who are members of a class action, but is not likely to impact standing for state and local government plaintiffs that bring lawsuits on behalf of their residents. In cases where victims have been exposed to toxic or hazardous substances, some state courts have found that plaintiffs have not satisfied standing for tort claims when their allegation of injury is limited merely to the likelihood of future harms. 102 However, standing requirements such as these are not likely to pose a potential barrier for climate tort plaintiffs because their claims for compensation, injunction, or another remedy typically focus both on past injuries and the projected costs of adaptation to future harms.

In any event, state courts should ultimately consider the corrective justice and social equity implications of turning away climate tort plaintiffs. Poor and marginalized populations are also likely to be burdened by a comparative power disadvantage in society, seriously limiting the prospect of obtaining adequate public aid and services – not to mention legislative changes that might improve their chances of getting their day in court against industry defendants. Today, and increasingly into the near future, state courts and common law will be the only refuge for scores of Americans

who suffer because of the misconduct of corporations that have ensured the inevitability of climate catastrophes.

Another challenge to these lawsuits will be the political question doctrine. State court thresholds to justiciability, especially the political question doctrine, will likely not be a barrier for courts to allow climate tort lawsuits to be heard on the merits. State courts are not bound by the federal political question doctrine, and they have developed their own jurisprudence based on their own constitutions. 103 Several state courts have rejected application of the political question doctrine to lawsuits seeking tort remedies under state common law, even when the controversies implicate political authorities and subjects. 104

Insurance Industry Limits on Liability May Hurt Vulnerable Americans

With the growing intensity of climate-driven wildfires, droughts, hurricanes, and flooding in recent years, it should come as little surprise that climate change is now a leading risk factor for U.S. insurers. Recent surveys of actuaries put climate change as the foremost risk for the first time - before the vulnerability of cyber-infrastructure, financial volatility, and terrorism. 105 And the measured risks and losses from climate-driven incidents are at an all-time high. 106 Leaders in both the finance and insurance sectors are increasingly sounding the alarm that corporations and their shareholders are also underappreciating the potential costs of climate threats.

Various subsectors of the insurance industry are likely to be affected by state climate tort litigation. The commercial liability sector provides coverage for all manner of businesses, including those in the fossil fuel industry. General liability insurers of diverse corporate entities will also undoubtedly become implicated in defending against victims seeking compensation from harms caused by failures to adapt to climate impacts.

Another insurance sector potentially implicated in climate tort litigation are life, health, and property insurers. In 2018, property insurers paid policyholders almost \$58 billion for covered losses related to natural disasters. 107 These insurers are likely to bring tort claims for liability

("subrogation") against corporate entities and, by extension, their respective commercial liability insurers, seeking to hold them liable for payouts to policyholders harmed by climate impacts or failures to adapt. Third-party investment companies that purchase subrogation rights are also likely to pursue this type of state climate tort litigation.

A harbinger of climate-related subrogation is the 2014 lawsuit brought by Illinois Farmers Insurance Company on behalf of hundreds of its policyholders. 108 The suit, filed against six Illinois counties and their water authorities, claimed violations of state tort and constitutional duties in their failure to implement adequate

purpose of putting the local governments on notice. 109

the measured risks and losses from climate-driven incidents are at an all-time high. stormwater management practices, leading to flood damages to policyholders. The complaints also describe the links between climatedriven intensification of precipitation and the inadequacy and defects of stormwater controls that led to flood losses. The plaintiffs withdrew the

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The reinsurance industry functions to manage risk throughout the insurance industry, ultimately constraining the terms and types of coverage and the

lawsuit several weeks after it was filed, suggesting that it had served the

limits on liability that insurers are capable of offering to private industry and the public at large. There are already conventional constraints on liability that will impact state climate torts. General liability policies typically cover only accidental damages and injuries and exclude more broadly harms that are "expected or intended" and, in certain circumstances, those resulting from discharges of pollution. There is a distinct body of case law that defines the types of injuries and exclusions covered by general liability coverage. Some industry experts have proposed that insurers consider revising policies to expressly exclude claims arising from climate lawsuits and impose tighter controls on the claims process, including the duty to defend. Some have suggested that the insurance industry develop a climate-specific general commercial liability offering as a supplement to conventional policies.

The insurance industry is likely to continue seeking to avoid growing liability for climate harms, direct and indirect. If it does, the socially and economically vulnerable, who are at a comparative resource disadvantage to corporate defendants and their insurers, are likely to suffer disproportionately. There is already a large gap between covered losses and uninsured losses. 114 Poorer and marginalized populations are also more likely to be uninsured themselves.

Limitations on insurance liability imposed by the reinsurance industry have the potential to help prevent and mitigate climate-driven harms by increasing corporate fear of liability, discouraging adaptation failures, and accelerating the transition away from fossil fuels. However, the socioeconomically disadvantaged victims of climate impacts are likely to suffer disproportionately from limits and other insurance industry responses to coverage held by corporate defendants.

This dynamic is at work, for example, in the way climate impacts are affecting the behavior of the homeowners' insurance and reinsurance industry. More than 350,000 homeowners in California live in state-designated "very high fire hazard severity zones." 115 Insurers have paid out over \$8.5 billion to homeowners for losses sustained during the 2018 Camp Fire episode alone and are beginning to seek reimbursement from the utility company Pacific Gas & Electric (PG&E), which has been blamed for causing the fire. 116 Meanwhile, small insurers have gone belly up, and the industry-financed guarantee program is unable or unwilling to pay out millions in orphaned claims. While this illustrates the insurance industry's lagging adaptation to climate change, it also indicates the need for lawmakers and regulators to implement incentives and deterrents that ensure industry response without losing sight of those who stand to lose the most – economically disadvantaged people who struggle to afford increasingly expensive coverage and those who suffer harms from climate impacts.

A number of state tort lawsuits have been filed against PG&E, which has since declared bankruptcy, amplifying the critical role of the insurance industry for compensation of victims. Wildfires like the Camp Fire episode are likely to occur more frequently and with greater intensity because of climate change, which drives the spread of tree disease and mortality and creates drought and temperature conditions that precipitate and sustain intense and persistent forest fires. The Camp Fire lawsuits do not explicitly raise climate or adaptation theories of causation. However, utilities could fail, as PG&E appears to have done, to adequately manage dead and dying

vegetation in their right-of-ways in ways, amplifying the risks and harms of wildfires due to climatedriven drought.

Many rural homeowners in these wildfire-prone areas are unable to sell homes because insurers are now unwilling to offer coverage at affordable prices to prospective buyers. Meanwhile, those homeowners are seeing increased premiums on their existing coverage, to the tune of 50 percent or more, or having



their coverage canceled altogether.¹¹⁷ Alternatives to mainstream insurers offer far less favorable coverage for two or three times the cost.¹¹⁸ Even with increasing rates and dropped policies, the insurance industry claims it is paying out more than it collects in premiums, all while being unable to pass on to consumers the increased costs imposed by the reinsurance industry.¹¹⁹

Many of the homeowners and residents of rural California live in poverty, and local economies are depressed after long declines in the timber industry. 120 Homeowners with the means to move away hollow out the local tax-base and other resources. This leaves low-income homeowners and renters immobilized by the stagnation in the real estate market. Fortunately, state lawmakers and regulators are responding by seeking to hold the insurance industry accountable by requiring increased transparency in publicly reporting rate hikes and canceled policies and by requiring insurers to offer coverage to homeowners who have taken steps to mitigate fire risk to their homes. 121 Additionally, lawmakers are exploring opportunities to provide subsidies to rural, low-income homeowners. 122

The insurance industry plays an essential role in sending economic signals to corporations to adapt to climate change, but state attorneys general, regulators, and lawmakers should hold insurers accountable to providing compensation for climate harms where the terms of coverage are clear. Government has a role to play in this growing challenge by ensuring

through rulemaking and enforcement that the terms of coverage are also just and equitable. Where the private insurance industry is unwilling or unable to offer coverage, the government must respond to fill the gaps, especially for marginalized and vulnerable populations, through increased funding for public offerings of insurance, buyouts, social services, and by eschewing law and policies designed to bail out or grant immunity to tort defendants. Private, public, and civic interests all have a stake in striking an optimal balance between cost and ensuring liability for tortious conduct while implementing conditions in coverage to reduce risk and cost, all while prioritizing the needs of vulnerable populations and communities ahead of profits.

Recommendations

Congress, state courts, the insurance industry, and the plaintiffs' bar each bear a responsibility for ensuring that those injured by the tortious conduct of fossil fuel producers and other entities that fail to adapt are able to seek compensation. Furthermore, lawmakers should prioritize the needs of and opportunities for socially and economically disadvantaged climate victims to obtain corrective justice.

Congress, state legislatures, and state courts should not restrict or limit climate torts because this would leave climate victims, and, especially, vulnerable populations, without compensatory remedies. Lawmakers must resist legislative riders that grant immunity of any kind to fossil fuel producers from state tort litigation. Congress must fully fund climate science research and protect scientists from retaliation and political interference. State courts should apply standing rules in ways that accommodate the realities of the difficulty of linking some climate harms to discrete sources, while adhering to appropriate limitations on the subject matter jurisdiction of the courts.

The insurance industry should not escape liability for compensation to vulnerable populations harmed by the conduct of their policyholders, and it should impose reasonable conditions on insurance policies that can help reduce risks of harm. Lawmakers and regulators should address the needs of socially and economically disadvantaged populations that cannot afford insurance policies of their own and who are at a power disadvantage compared to corporations and their insurers when it comes to seeking compensation for harms caused by climate change and failures to adapt.

The plaintiffs' bar should endeavor to provide legal representation to victims of climate change, seeking out especially those disadvantaged communities and populations for whom state torts is not a last, but only, resort for compensation. Plaintiffs' attorneys should establish a stronger alliance with public interest organizations that have substantive expertise on climate impacts or whose constituencies include potential clients, and, in turn, provide education to these groups on the value and process of the tort law system. Lastly, in representing climate plaintiffs, the bar should also promote accountability and transparency by publicly sharing information about tortious corporate conduct and calling on lawmakers and courts to not limit state climate tort litigation.

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