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Working Paper 1

Ideas for Action Series

Climate Change Cost Recovery Laws



Climate Law
Accelerator



Climate Change Cost Recovery Laws

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About TERRA

The Earth Rights Research & Action (TERRA) Program at New York University (NYU) School of Law is a global collaborative hub for research, advocacy, and strategic legal action on ecological emergencies. TERRA NYU Law pursues novel actions with a range of collaborators across geographies and disciplines. The Ideas for Action Working Paper Series, produced in collaboration with law students enrolled in the TERRA Clinical Program at NYU Law, advances research-based explorations of questions at the forefront of earth law which culminate in practical solutions advancing the fields of human rights and environmental justice.

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I. Introduction

In January 2025, wildfires swept through Los Angeles, California, and the surrounding areas.¹ More than sixty thousand acres burned, over sixteen thousand structures were destroyed, and thirty people lost their lives.² The estimated damages amounted to more than \$250 billion, making the event one of the costliest natural disasters in U.S. history.³ Scientists estimate that extreme fire weather conditions, which drove the wildfires, were 35 percent more likely due to human-induced climate change.⁴ Unfortunately, these devastating events may be the new norm, as extreme weather events and slow-onset trends, such as rising temperatures, are becoming more frequent and intense for communities worldwide.⁵ In the United States, in 2024, “there were 27 individual weather and climate disasters with at least \$1 billion in damages” resulting in total costs of \$182.7 billion and causing at least 568 direct or indirect fatalities.⁶ The global cost of climate change is estimated to reach \$38 trillion per year by 2050.⁷ These figures may underestimate the actual costs of climate change, which include noneconomic losses and damages, such as the loss of biodiversity, cultural heritage, and Indigenous and local knowledge.⁸

Who foots the bill for these immense costs? As it stands, the burden often falls on taxpayers, who fund local government efforts to adapt to climate change and rebuild following extreme weather events.⁹ However, efforts by the United States and the Philippines indicate that governments are seeking to shift this burden through a new mechanism: cost recovery laws.¹⁰

Although these laws might seem novel, they draw on past efforts to hold those who cause environmental damage and other rights violations responsible for related costs. In the U.S. context, the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is a crucial precedent for cost recovery legislation. CERCLA imposed broad liability for cleanup costs on the current and former owners of facilities where hazardous substances were disposed of and established a Hazardous Substance Superfund Trust Fund to pay for the cleanup of sites where responsible parties cannot be found or cannot pay.¹¹ Since 1992, scholars have suggested adapting the superfund concept to the climate change context, holding fossil fuel producers liable for the immense costs of climate impacts exacerbated

¹ Roger Vincent, “Estimated Cost of Fire Damage Balloons to More Than \$250 Billion,” *L.A. Times*, January 24, 2025, <https://www.latimes.com/business/story/2025-01-24/estimated-cost-of-fire-damage-balloons-to-more-than-250-billion>.

² “The Department of Forestry and Fire Protection,” *Cal Fire*, accessed April 27, 2025, <https://www.fire.ca.gov/>.

³ Vincent, “Estimated Cost of Fire Damage Balloons to More Than \$250 Billion.”

⁴ “Climate Change Increased the Likelihood of Wildfire Disaster in Highly Exposed Los Angeles Area,” World Weather Attribution, last modified January 28, 2025, <https://www.worldweatherattribution.org/climate-change-increased-the-likelihood-of-wildfire-disaster-in-highly-exposed-los-angeles-area/>.

⁵ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (United Nations, 2023), https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

⁶ Adam Smith, “2024: An Active Year of U.S. Billion-Dollar Weather and Climate Disasters,” National Oceanic and Atmospheric Administration, last modified January 10, 2025, <https://www.climate.gov/news-features/blogs/beyond-data/2024-active-year-us-billion-dollar-weather-and-climate-disasters>.

⁷ Maximilian Kotz, Andres Leverman, and Leonie Wenz, “The Economic Commitment of Climate Change,” *Nature* 628 (2024): 551–7, <https://doi.org/10.1038/s41586-024-07219-0>. Value is measured in 2005 dollars.

⁸ “Climate Change Is Costing the World \$16 Million Per Hour: Study,” World Economic Forum, last modified October 23, 2023, <https://www.weforum.org/stories/2023/10/climate-loss-and-damage-cost-16-million-per-hour>; “What is ‘non-economic’ loss and damage (NELD)?,” London School of Economics, last modified June 20, 2023, <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-non-economic-loss-and-damage-neld>.

⁹ Eric Weltman and Mia DiFelice, “Climate Change is Costing Us. It’s Time for Big Oil to Pay Up,” Food & Water Watch, July 8, 2024, <https://www.foodandwaterwatch.org/2024/07/08/climate-superfund-laws/>.

¹⁰ The authors adopt the more expansive term cost recovery laws, rather than the U.S.-specific term “superfund” laws, to consider laws that take different legal approaches to arrive at the same goal of recovering costs associated with climate change impacts.

¹¹ “Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Federal Facilities,” U.S. Environmental Protection Agency, accessed April 28, 2025, <https://www.epa.gov/enforcement/comprehensive-environmental-response-compensation-and-liability-act-cercla-and-federal>.

by their products.¹² The U.S. jurisdictions described in this report are the first to have taken up this challenge. In the Philippine context, a proposed climate change reparations law similarly draws on past precedent by using preexisting reparations boards as a model.¹³ While the Filipino approach is substantively different, it serves as a helpful example of alternative approaches to recouping climate damages and a salient reminder that policymaking often requires looking back to chart the way forward.

Drawing on cost recovery legislation and conversations with bill drafters and supporters, we distill the key characteristics of both passed and pending laws in the United States and the Philippines, highlighting their purposes, mechanisms for collecting and using funds, and reliance on climate science. We then offer takeaways for future advocates, scholars, and policymakers who seek to develop politically feasible and legally durable cost recovery laws in new jurisdictions.

II. Existing Cost Recovery Legislation

A. Jurisdiction and Status

Existing cost recovery legislation efforts are primarily concentrated in the United States, where Vermont and New York have already enacted such legislation.¹⁴ Eleven other U.S. states have introduced cost recovery bills in their legislatures, and similar federal legislation has been introduced in the U.S. Congress.¹⁵ Outside of the United States, the Philippines has introduced the Climate Accountability (CLIMA) Act to similarly recoup a portion of climate damages.¹⁶

¹² Christopher D. Stone, “Beyond Rio: ‘Insuring’ Against Global Warming,” *The American Journal of International Law* 86, no. 3 (1992): 445–88, <https://doi.org/10.2307/2203963>.

¹³ “About Us,” Human Rights Violations’ Victims Memorial Commission, accessed April 28, 2025, <https://hrvmmc.gov.ph/about-us/>; “History,” Marawi Compensation Board, accessed April 28, 2025, <https://mcb.gov.ph/history/>.

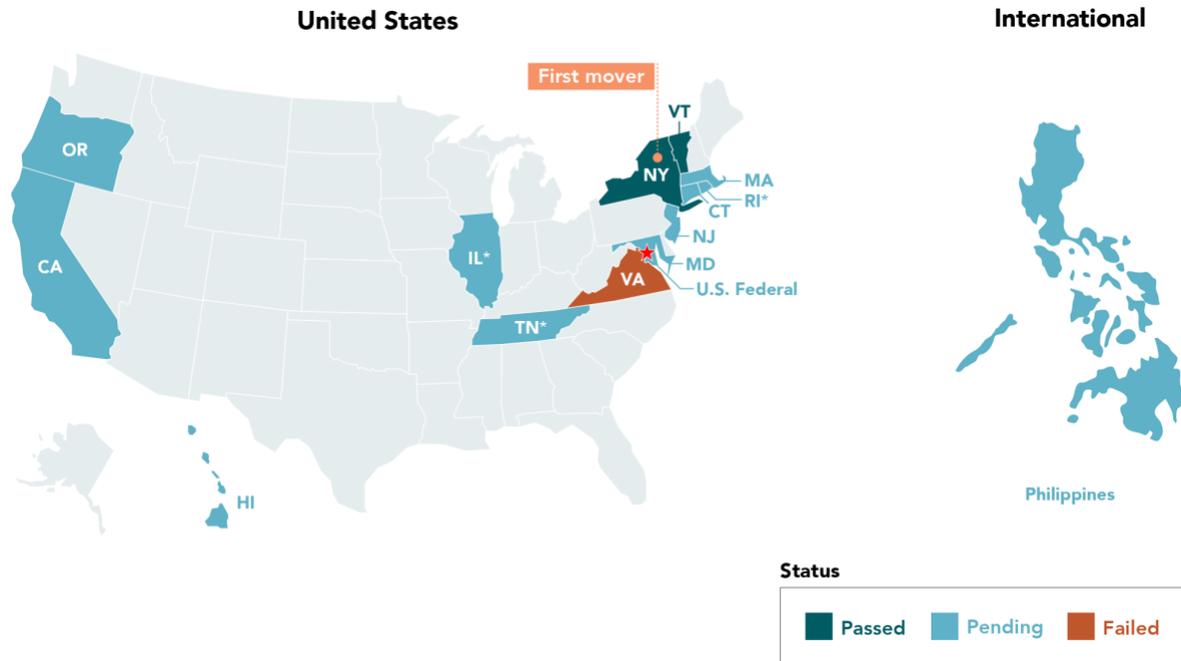
¹⁴ Climate Change Superfund Act, S. 2129B (NY 2024), <https://www.nysenate.gov/legislation/bills/2023/S2129/amendment/B>; Climate Superfund Act, S. 259 (VT 2023), <https://legislature.vermont.gov/Documents/2024/Docs/ACTS/ACT122/ACT122%20As%20Enacted.pdf>.

¹⁵ This report focuses on cost recovery legislation introduced as of January 31, 2025. In U.S. jurisdictions with identical bills pending in multiple chambers, cites hereafter will be to Senate bills only. Polluters Pay Climate Superfund Act of 2025, S.B. 684 (CA), https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202520260SB684; Polluters Pay Climate Superfund Act of 2025, A.B. 1243 (CA), https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202520260AB1243; An Act Creating a Climate Change Superfund, H.B. 6280 (CT 2025), <https://www.cga.ct.gov/2025/TOB/H/PDF/2025HB-06280-R01-HB.PDF>; Climate Change Superfund Act, S.B. 1652 (HI 2025), https://data.capitol.hawaii.gov/sessions/session2025/bills/SB1652_PDF; Extreme Weather Recovery Act, H.B. 3594 (IL 2025), <https://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=114&GA=104&DocTypeId=HB&DocNum=3594&GAID=18&LegID=162294&SpecSess=&Session=>; Climate Change Adaptation Cost Recovery Act, S. 588 (MA 2025), <https://malegislature.gov/Bills/194/S588>; Climate Change Adaptation Cost Recovery Act, H. 1014 (MA 2025), <https://malegislature.gov/Bills/194/H1014>; Responding to Emergency Needs From Extreme Weather (RENEW) Act of 2024, S.B. 958 (MD), <https://mgaleg.maryland.gov/2024RS/bills/sb/sb0958F.pdf>; Responding to Emergency Needs From Extreme Weather (RENEW) Act of 2024, H.B. 1438 (MD), <https://mgaleg.maryland.gov/2024RS/bills/hb/hb1438F.pdf>; Climate Superfund Act, S. 3545 (NJ 2024), https://pub.njleg.state.nj.us/Bills/2024/S4000/3545_11.PDF; Climate Superfund Act, A. 4696 (NJ 2024), https://pub.njleg.state.nj.us/Bills/2024/A5000/4696_11.PDF; An Act Relating to Greenhouse Gas Emissions; and prescribing an effective date, S.B. 682 (OR 2025), <https://olis.oregonlegislature.gov/liz/2025R1/Downloads/MeasureDocument/SB682/Introduced>; Rhode Island Climate Superfund Act of 2025, S.B. 326, <https://webserver.rilegislature.gov/BillText/BillText25/SenateText25/S0326.pdf>; Climate Resiliency Fund Act, S.B. 702 (TN 2025), <https://www.capitol.tn.gov/Bills/114/Bill/SB0702.pdf>; Climate Resiliency Fund Act, H.B. 716 (TN 2025), <https://www.capitol.tn.gov/Bills/114/Bill/HB0716.pdf>; Extreme Weather Relief Act, H.B. 2233 (VA 2025), <https://lis.virginia.gov/bill-details/20251/HB2233/text/HB2233>; Polluters Pay Climate Fund Act of 2024, S. 5054, 118th Cong., <https://www.congress.gov/bills/118th-congress/senate-bill/5054>; Polluters Pay Climate Fund Act of 2024, H.R. 9573, 118th Cong., <https://www.congress.gov/bills/118th-congress/house-bill/9573>.

¹⁶ An Act to Institute Policies and Systems to Address Climate Change, Establishing the Necessary Institutional Mechanisms for the Protection of Most Vulnerable Communities From Loss and Damage in the Country, Providing for Corporate and State Accountabilities and Reparations for Violation Thereof, and Other Purposes, H.B. 9609 (Philippines 2023), https://docs.congress.hrep.online/legisdocs/basic_19/HB09609.pdf.

This report focuses on the Philippines' CLIMA Act and U.S. laws originating in Vermont, New York,¹⁷ California, Connecticut, Hawaii, Maryland,¹⁸ Massachusetts, New Jersey, Oregon, Virginia, and the U.S. Congress.¹⁹ Since finalizing this report in January 2025, Rhode Island, Illinois, and Tennessee have introduced cost recovery laws.²⁰ While these recent bills are outside the temporal scope of this report, they highlight the novel approaches being taken²¹ that warrant further scholarly analysis.

Existing and Proposed Cost Recovery Laws



¹⁷ The 2024 New York cost recovery legislation has since been amended to (1) extend the covered period of the bill, (2) require potentially responsible parties to provide the New York State Department of Environmental Conservation (NYSDEC) with certain information, (3) increase the amount of time afforded to NYSDEC to promulgate regulations and publish its resilience plan, and (4) establish a procedure for a potentially responsible party to request reconsideration of its cost recovery demand. Climate Change Superfund Act, S. 824 (NY 2025), <https://www.nysenate.gov/legislation/bills/2025/S824>.

¹⁸ The 2024 Maryland RENEW Act was reintroduced in the 2025 legislative session and has since been amended to solely authorize a study to assess the total cost of greenhouse gas (GHG) emissions in the state. This report assesses the proposed text of the 2025 RENEW Act as originally introduced. Climate Change Adaptation and Mitigation - Total Assessed Cost of Greenhouse Gas Emissions - Study and Reports, S.B. 149 (MD 2025), <https://mgaleg.maryland.gov/2025RS/bills/sb/sb0149f.pdf>.

¹⁹ House of Representatives of the Philippines, "Committee on Climate Change," Facebook, February 3, 2025, <https://www.facebook.com/HouseofRepsPH/videos/4092314044388539>; "Bill Status S.259 (Act 122)," Vermont General Assembly, accessed March 16, 2025, https://legislature.vermont.gov/bill/status/2024/S_259; "Senate Bill S2129A," The New York State Senate, accessed March 16, 2025, <https://www.nysenate.gov/legislation/bills/2023/S2129/amendment/A>; "SB-684 Polluters Pay Climate Superfund Act of 2025," California Legislative Information, accessed April 28, 2025, https://leginfo.ca.gov/faces/billStatusClient.xhtml?bill_id=202520260SB684; "H.B. No. 6280," Connecticut General Assembly, accessed April 28, 2025, https://www.cga.ct.gov/asp/CGABillStatus/cgabillstatus.asp?selBillType=Bill&bill_num=HB6280; "SB1652," Hawaii State Legislature, accessed April 7, 2025, https://www.capitol.hawaii.gov/session/measure_indiv.aspx?billtype=SB&billnumber=1652&year=2025; "SB0958," Maryland General Assembly, accessed April 1, 2025, <https://mgaleg.maryland.gov/mgaweb/Legislation/Details/SB0958?ys=2024RS>; "Bill S.588," The 194th General Court of the Commonwealth of Massachusetts, accessed April 1, 2025, <https://malegislature.gov/Bills/194/S588>; "Bill S3545 Sca (1R)," New Jersey Legislature, accessed April 7, 2025, <https://www.njleg.state.nj.us/bill-search/2024/S3545>; "SB 682," Oregon State Legislature, accessed April 7, 2025, <https://olis.oregonlegislature.gov/liz/2025R1/Measures/Overview/SB682>; "HB2233 Extreme Weather Relief Act; established," Virginia Legislative Information System, accessed April 28, 2025, <https://lis.virginia.gov/bill-details/20251/HB2233>; "S.5054 - Polluters Pay Climate Fund Act of 2024," Congress.gov, accessed April 1, 2025, <https://www.congress.gov/bill/118th-congress/senate-bill/5054>.

²⁰ H.B. 3594 (IL 2025); S.B. 326 (RI 2025); S.B. 702 (TN 2025).

²¹ H.B. 3594 (IL 2025) (creates an individual civil cause of action against major GHG emitters for damage from climate-related extreme weather events); S.B. 0326 (RI 2025) (creates a fund to recover state expenditures on climate change response from 2009 to 2026).

B. Purpose

Climate change cost recovery laws share a common goal: to shift the financial burden of climate-related impacts from taxpayers to major emitters by holding them financially liable for their historical greenhouse gas (GHG) emissions.²² They achieve this goal by establishing a fund to collect payments from designated fossil fuel companies and using said funds for climate change-related adaptation and restoration projects.

Each law operates on the principle that those responsible for significant emissions should bear the costs of climate change adaptation, following the polluter pays principle. Rooted in environmental and international law, this principle provides that polluters should pay their fair share of the damage caused by the pollution they produce.²³ Despite the significant variation in its application, the polluter pays principle generally requires those who cause pollution to “bear the costs of managing it to prevent damage to human health and the environment” through taxation, charges, and liability laws primarily at the domestic level.²⁴ Climate change cost recovery laws fall into the latter category.

C. Responsible Parties

All cost recovery laws in U.S. jurisdictions establish the same criteria for determining responsible parties—the entities required to pay into the cost recovery fund. These criteria usually include entities that (1) were engaged in the fossil fuel business anytime within an established “covered period,” (2) are responsible for more than one billion metric tons of emissions during the covered period, and (3) have sufficient connection with the relevant state to satisfy the nexus requirements of the U.S. Constitution.²⁵ Thus, cost recovery laws operate under a standard of strict liability—meaning a state may impose damages on responsible parties simply because they engaged in fossil fuel extraction and refinement during the covered period.

Meanwhile, the Filipino CLIMA Act holds parties accountable for climate impacts through an adjudicatory process that determines whether violations of environmental law have occurred.²⁶ Drawing from international legal principles, such as the due diligence standard of care and the precautionary principle, and Filipino penal law, the Act establishes obligations for businesses and authorizes private citizens affected by climate change to bring claims before a Climate Change Reparations Board against those businesses for violations of the Act.²⁷ Entities subject to potential suits include (1) “businesses that reported a gross income of more than ₱100,000,000 in the previous tax year” and (2) “carbon majors,”²⁸ regardless of their gross income. Carbon Majors are defined as “multinational or state-owned producers, traders, and refineries of crude oil, natural gas, coal, and cement, that significantly contribute to global greenhouse gas emissions without taking climate accountability, and therefore primarily drive climate change.”²⁹

²² For instance, the New York law notes that “[t]he obligation to pay under the program is based on the fossil fuel companies’ historic contribution to the buildup of greenhouse gases that is largely responsible for climate change. . . . [the \$75 billion fund] is designed to have a meaningful impact on the burden borne by New York State taxpayers for climate adaptation.” S. 824, §§ 1(5), (5)(c) (NY 2025).

²³ Conference on Environment and Development, A/CONF.151/26/Rev.1, August 12, 1992, https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf.

²⁴ Jose Felix Pinto-Bazurco, “How to Enforce the Polluter-Pays Principle,” International Institute for Sustainable Development, last modified February 8, 2022, <https://www.iisd.org/articles/polluter-pays-principle>.

²⁵ H.B. 6280, § 1(a)(21) (CT 2025); S.B. 1652, § 3 (HI 2025); S. 588, § 1 (MA 2025); S.B. 149, § 2-1701(T) (MD 2025); S. 824, § 76-0101(21) (NY 2025); S.B. 682, § 2(17) (OR 2025); H.B. 2233, § 10.1-1028 (VA 2025); S. 259, § 596(22) (VT 2023). The federal bill does not have a jurisdictional requirement. S. 5054, 118th Cong., § 4691(c) (2024). The California and New Jersey bills do not mention the Constitution, but the former invokes civil procedure rules. S.B. 684, § 71370 (CA 2025); S. 3545, § 2 (NJ 2024).

²⁶ H.B. 9609, §§ 8, 17 (Philippines 2023).

²⁷ H.B. 9609, §§ 4, 5, 6, 17, 21 (Philippines 2023).

²⁸ “About Carbon Majors,” InfluenceMap, accessed April 28, 2025, <https://carbonmajors.org/multipage/About-Carbon-Majors-416>. “Carbon Majors” are commonly defined as the world’s 180 largest fossil fuel and cement producers.

²⁹ H.B. 9609, §§ 3(c), (e) (Philippines 2023).

D. Payment Amounts and Means

All existing and proposed cost recovery laws in U.S. jurisdictions operate by delegating power to a state agency to request payments (often called “cost recovery demands”) from responsible parties, which are collected in a fund.³⁰ The amount of these cost recovery demands is determined by a responsible party’s share of the total emissions within the covered period; an equivalent share of the total fund amount is then designated as the party’s payment amount. For example, if under New York’s Climate Change Superfund Act, the New York State Department of Environmental Conservation deems a responsible party accountable for 4 percent of the aggregate emissions in New York State between 2000 and 2024, that entity must pay 4 percent of the \$75 billion fund, or \$3 billion.³¹ Although U.S. legislation adopts a standard architecture, the specific covered periods and total fund amounts differ (see figure 1 for an overview).

In contrast, the Philippines’ CLIMA Act raises funds via congressional allotment, donations, endowments, grants, and contributions and accesses funds generated by international loss and damage financing.³² The law also places a fine equal to 15 percent of a business’s gross income reported in its latest regulatory disclosure for any act of greenwashing, climate denialism, or Strategic Lawsuit Against Public Participation (SLAPP) suits and imposes penalties on businesses that breach their determined threshold for acceptable emissions.³³ These payments are then placed in the Climate Change Action Welfare and Support (CLAWS) Fund managed by the reparations board.³⁴

Fig. 1. Comparison of the details of cost recovery laws in U.S. jurisdictions³⁵

Jurisdiction	State Agency Responsible for Fund	Covered Period	Emissions Threshold	Fund Amount
California	CA Environmental Protection Agency	1990–2024		TBD by the CA Environmental Protection Agency
Maryland	MD Department of the Environment	1994–2023		TBD by the State Treasurer
Vermont	VT Agency of Natural Resources	1995–2024		
Virginia	VA Department of Conservation and Recreation			

³⁰ S.B. 684, § 71370(d) (CA 2025); H.B. 6280, § 1(b) (CT 2025); S.B. 1652, § 225M-B(a) (HI 2025); S. 588, § 1 (MA 2025); S.B. 149 § 2–1701(F) (MD 2025); S. 3545, § 2 (NJ 2024); S. 824, § 76-0101(6) (NY 2025); S.B. 682, § 3 (OR 2025); S. 259, § 596(6) (VT 2023); S. 5054, 118th Cong., § 4691(b) (2024).

³¹ S. 824, § 76-0103(3)(b) (N.Y. 2025).

³² H.B. 9609, § 13 (Philippines 2023).

³³ H.B. 9609, § 21 (Philippines 2023).

³⁴ “Committee on Climate Change,” February 3, 2025, House of Representatives of the Philippines, Facebook, <https://www.facebook.com/HouseofRepsPH/videos/4092314044388539>.

³⁵ S.B. 684, § 71370 (CA 2025); H.B. 6280, §§ 1(a)(8), 1(b)-(c) (CT 2025); S.B. 1652, § 225M-C(b) (HI 2025); S. 588, §§ 1, 2 (MA 2025); S.B. 149, § 2-1701 (MD 2025); S. 3545, §§ 2, 3 (NJ 2024); S. 824, § 76-0101 (NY 2025); S.B. 682, §§ 2, 7 (OR 2025); H.B. 2233, § 10.1-1028-30 (VA 2025); S. 259, § 596 (VT 2023); S. 5054, 118th Cong., § 4691 (2024).

Oregon	OR State Treasurer		One billion metric tons during the covered period	
Massachusetts	MA Executive Office of Energy and Environmental Affairs			TBD by the Office of Energy and Environmental Affairs
Connecticut	CT Department of Energy and Environmental Protection	1995–2025		TBD by the State Treasurer
New Jersey	NJ Department of Environmental Protection	1995–Date of Passage		TBD by the State Treasurer
Hawaii	HI Office of Planning and Sustainable Development	2000–2018		\$10 billion
U.S. Federal	Secretary of the Treasury	2000–2022		\$1 trillion
New York	NY State Department of Environmental Conservation	2000–2024		\$75 billion

E. Use of Funds

In U.S. jurisdictions, once responsible parties have been determined, payments have been requested, and funds have been collected, the responsible agency must disburse funds to eligible projects. In many of the bills, the process by which this occurs is somewhat vague; delegating authority to agencies to implement policy directives, however, is a recognized practice in the United States.³⁶ The Philippines’ CLIMA Act similarly delegates disbursement decisions to another government body; however, rather than granting said power to an existing agency, the Act creates an independent Climate Change Reparations Board that assesses individual claims.³⁷

Most U.S. laws broadly define eligible climate adaptation projects either as those specifically “designed to respond to, avoid, moderate, repair, or adapt to any negative impacts caused by climate change”³⁸ or similar investments.³⁹ New York legislation, for example, provides a nonexhaustive list of eligible projects:

³⁶ “Rules and Rulemaking,” Library of Congress Research Guides, accessed April 28, 2025, <https://guides.loc.gov/administrative-law/rules>.
³⁷ H.B. 9609, §§ 13–14 (Philippines 2023); Tony La Viña et al., “The Urgent Need for a Climate Accountability Act Prospects and Challenges of Climate Accountability in the Philippines,” Manila Observatory, accessed April 28, 2025, <https://www.observatory.ph/2024/09/23/climate-accountability-act/>.
³⁸ S. 259, § 596(2) (VT 2023); S. 824, § 76-0101(3) (NY 2025); S. 588, § 1 (MA 2025); S. 3545, § 2 (NJ 2024); H.B. 6280, § 1(j) (CT 2025); S.B. 682, § 2(1) (OR 2025).
³⁹ S.B. 684, § 71370(o)(1) (CA 2025) (“projects and programs within the state to mitigate, adapt, or respond to the damages and harms from climate change”); S.B. 149, §2-1701(B)(1) (MD 2025) (“project[s] designed to avoid, moderate, or repair damage caused by climate change”); S. 5054, 118th Cong., § 4(b) (2024) (“investments in climate resilience, adaptation, disaster response, and environmental justice”). The Virginia bill, however, defines the scope of projects more narrowly to include projects related to extreme weather events or general

[R]estoring coastal wetlands and developing other nature-based solutions and coastal protections; upgrading storm water drainage systems; making defensive upgrades to roads, bridges, subways, and transit systems; preparing for and recovering from hurricanes and other extreme weather events; undertaking preventive health care programs and providing medical care to treat illness or injury caused by the effects of climate change; relocating, elevating, or retrofitting wastewater treatment plants vulnerable to flooding; installing energy efficient cooling systems and other weatherization and energy efficiency upgrades and retrofits in public and private buildings, including schools and public housing; upgrading parts of the electrical grid to increase stability and resilience, including supporting the creation of self-sufficient clean energy microgrids; addressing urban heat island effects through green spaces, urban forestry, and other interventions; and responding to harmful algal blooms, loss of agricultural topsoil, and other climate-driven ecosystem threats to forests, farms, fisheries, and food systems.⁴⁰

The Philippines’ CLIMA Act is similarly broad in allowing for recovery, rehabilitation, and capacity-building measures, but also includes specific provisions that recognize the individualized nature of the expected claims its reparations board will receive, such as compensation for economic and noneconomic harms, technology transfers, financial support, and relocation.⁴¹

Several jurisdictions also require a certain percentage of funds to benefit marginalized populations. These populations are generally defined as communities possessing certain socioeconomic criteria, such as significant representation of people of color or low-income families (see figure 2). The Philippines’ CLIMA Act, in comparison, does not provide specific allotments for particular communities or purposes. This may be due to the bill’s framework of individualized claims, in which private citizens can seek compensation for climate change–related impacts.

Fig. 2. Comparison of U.S. cost recovery laws’ consideration of marginalized communities⁴²

Jurisdiction	Term	Appropriation	Definition
California	Disadvantaged communities	Not less than 40 percent of money expended	To be defined by the California Environmental Protection Agency; must be “facing climate impacts”
Connecticut	Environmental justice communities	None, but representatives are to be consulted by the Department in the development	“(A) a United States census block group, as determined in accordance with the most recent United States census, for which thirty percent or more of the population consists of low income persons who are not institutionalized and have an income below two hundred percent of the federal poverty level, or (B) a distressed municipality”

investments in climate resilience. H.B. 2233, § 10.1-1028 (VA 2025) (“project[s] designed to respond to, repair, or adapt to negative impacts caused by climate change-fueled extreme weather events.”).

⁴⁰ S. 824, § 76-0101 (NY 2025).

⁴¹ H.B. 9609, § 13 (Philippines 2023).

⁴² S.B. 684, § 71372.1 (CA 2025); H.B. 6280, § 1(a)(11), 1(m) (CT 2025); S.B. 1652, § 225M-B(b)(7) (HI 2025); S. 588, §§ 1, 2(7) (MA 2025); S.B. 149, § 2–1701(D) (MD 2025); S. 824, § 76-0103(2) (NY 2025); S.B. 682, § 10(4) (OR 2025); H.B. 2233, § 10.1-1030 (VA 2025); S. 5054, 118th Cong. § 9512(b) (2024).

		of a strategy for enhancing resilience to climate change	
Hawaii	Disadvantaged communities	At least 40 percent of the cost recovery program's expenditures	Undefined
Maryland	Communities disproportionately affected by climate impacts	40 percent of qualified expenditures	Areas defined by the Maryland Department of the Environment to be "underserved communities," "overburdened communities," and "areas that are vulnerable to climate impacts, such as flooding, storm surges, and urban heat island effects, due to low levels of tree coverage, high levels of impervious surfaces, or other factors"
Massachusetts	Environmental justice populations	40 percent of "qualified expenditures"	Neighborhoods where (1) "the annual median household income is not more than 65 percent of the statewide annual median household income, [(2)] minorities comprise 40 percent or more of the population, [(3)] 25 percent or more of households lack English language proficiency, or [(4)] minorities comprise 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the statewide annual median household income"
New York	Disadvantaged communities	At least 35 percent, with a goal of 40 percent or more of the overall benefits of program spending	Communities that "bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate-income households"
Oregon	Federally recognized Indian tribes within the state	20 percent of money deposited into the Fund every two years	N/A

U.S. Federal	Environmental justice communities	40 percent “of the amounts appropriated from the Fund each fiscal year”	Communities with “significant representation of communities of color, low-income communities, or Tribal and Indigenous communities that experiences, or is at risk of experiencing, higher or more adverse human health or environmental effects as compared to other communities”
Virginia	Environmental justice communities	At least 50 percent of “moneys in the Fund”	Any community that (1) “has an annual household income equal to or less than the greater” of 200 percent of the federal poverty level or 80 percent “of the median income of the area in which the household is located”; or (2) is a “geographically distinct area where the population of color. . . is higher than the population of color in” Virginia

F. Climate Science

While the degree of explicit acknowledgment varies across the relevant cost recovery laws, it is clear that climate science has played a role in their formulation and will have a hand in how some of these laws are implemented. The Maryland, New York, federal, California, and Philippine laws all recognize that fossil fuel use is the dominant driver of climate change—a conclusion determined by climate science.⁴³ The Filipino CLIMA Act repeatedly references an Intergovernmental Panel on Climate Change (IPCC) report as evidence for existing climate change impacts and the need to limit further warming by reducing fossil fuel emissions.⁴⁴ The original pieces of legislation of California, Maryland, and New York also note that peer-reviewed research can determine, with great accuracy, the share of GHGs released by specific fossil fuel companies.⁴⁵

The legislative process provides insight into how climate science, including attribution science, was considered and leveraged by policymakers in the states that have successfully enacted cost recovery laws. Attribution science generally involves separating a given variable, such as human-induced warming or a specific source of emissions, to estimate that variable’s influence on natural and human-made systems.⁴⁶ For example, the Vermont legislature considered testimony from a climate scientist during the bill’s development on how attribution science can quantify economic losses from the impacts of global warming to date and attribute those losses back to particular emissions or emitters.⁴⁷ In New York, legislators used science to support the bill during legislative debates. Specifically, they relied on emerging evidence that the largest one hundred fossil fuel–producing companies are responsible for more than 70 percent of global GHG emissions since 1988.⁴⁸

⁴³ S.B. 684, § 2(a)(1) (CA 2025); S.B. 149, pmbl. (MD 2025); S.B. 824, § 1(1) (N.Y. 2025); S. 5054, 118th Cong., § 2(a) (2024).

⁴⁴ H.B. 9609 (Philippines 2023). The IPCC is a United Nations body that provides scientific assessments of climate change, its impacts, and possibilities for adaptation and mitigation. “About the IPCC,” Intergovernmental Panel on Climate Change, accessed May 6, 2025, <https://www.ipcc.ch/about/>.

⁴⁵ S.B. 149, pmbl. (MD 2025); S.B. 684, § 2(a)(6) (CA 2025); SB 2129, § 2(3) (NY 2024).

⁴⁶ Climate change attribution is the use of statistical science to determine the impact of human influence on the climate system and extreme weather events. Jonathan D. Haskett, “Is That Climate Change? The Science of Extreme Event Attribution,” Congressional Research Service, 2023, <https://www.congress.gov/crs-product/R47583>.

⁴⁷ “Statement of Dr. Justin S. Mankin,” Hearing on S. 259 Before the Senate Judiciary Committee, 2024, <https://legislature.vermont.gov/Documents/2024/WorkGroups/Senate%20Judiciary/Bills/S.259/Witness%20Documents/S.259~Justin%20Mankin~Written%20Testimony~2-22-2024.pdf>; Abagael Giles, “Fossil Fuel Companies Can be Linked to Climate Damages, Dartmouth Scientist Tells Vermont Lawmakers,” *Vermont Public*, April 11, 2024, <https://www.vermontpublic.org/local-news/2024-04-11/fossil-fuel-companies-can-be-linked-to-climate-damages-dartmouth-scientist-tells-vermont-lawmakers>.

⁴⁸ “Letter from Liz Krueger, New York State Senator, and Jeffrey Dinowitz, New York State Assembly Member, to Kathy Hochul, Governor of New York,” August 12, 2024 (on file with author); Tess Riley, “Just 100 Companies Responsible for 71% of Global Emissions, Study Says,”

In addition to informing the development of various bills, climate science is also expected to play a role in their implementation. The Vermont, California, Massachusetts, Connecticut, Virginia, Oregon, Hawaii, and Maryland laws direct their respective environmental protection agencies to calculate appropriate fines on the basis of science,⁴⁹ while the Philippine law mandates that the Climate Change Reparations Board must have two members with scientific expertise.⁵⁰ The Philippine law also suggests that climate change attribution science can be used as a basis for calculating accountability and the amount of damages for which entities are responsible.⁵¹ Federal, Hawaii, and Maryland laws use standardized formulas for emissions calculations.⁵²

California's Polluters Pay Climate Cost Recovery Act goes the furthest in incorporating attribution science into liability assessments, directing its Environmental Protection Agency to (1) calculate the total climate costs caused since 1990 and projected to be incurred up to 2045; (2) determine each major emitter's proportional liability on the basis of their emissions from 1990 to 2024; and (3) consult with state and national scientific actors to ensure the use of "the best available scientific methodologies."⁵³ The Act specifies that, in conducting its climate cost study, the state Environmental Protection Agency should consider "existing best peer-reviewed and publicly available science on climate impacts and costs, including climate attribution science and methodologies, California's Fourth Climate Change Assessment, information available from California's ongoing Fifth Climate Assessment, and any future relevant assessments."⁵⁴

III. Takeaways

As climate change-related costs continue to rise globally, individuals, communities, and local governments are left to carry the financial burden. While legal mechanisms to recover these expenses from responsible parties vary across local legal and political contexts, existing cost recovery laws provide valuable insights. Based on the jurisdictions analyzed above, this section offers takeaways for scholars, communities, advocates, and policymakers studying and considering similar legal efforts.⁵⁵

The Guardian, July 10, 2017, <https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change>.

⁴⁹ S.B. 684, § 71371.3 (CA 2025); H.B. 6280, § 1(l) (CT 2025); S.B. 149, § 2-1707(B)(1) (MD 2025); S.B. 259, § 599a (VT 2023); S. 588, § 2(c)-(e) (MA 2025); H.B. 2233, § 10.1-1032 (VA 2025); S.B. 682, § 4(1) (OR 2025); S.B. 1652, § 225M-D(a)(1) (HI 2025); S.B. 2129, § 76-0103(4)(i) (NY 2024). The New Jersey bills stand out for not mentioning the use of science. S.B. 3545 (NJ 2024).

⁵⁰ H.B. 9609, § 14 (Philippines 2023).

⁵¹ H.B. 9609, § 12 (Philippines 2023).

⁵² S.B. 1652, § 225M-C(e) (HI 2025); S.B. 149, § 2-1704(D)(3) (MD 2025); S. 5054, 118th Cong., §3(a) (2024). These standardized formulas are codified in 40 C.F.R. § 98.38 (2025).

⁵³ S.B. 684, § 71371.3 (CA 2025).

⁵⁴ S.B. 684, § 71371.3 (CA 2025).

⁵⁵ While outside of the scope of this report, it is worth noting that the existing climate cost recovery laws in Vermont and New York have already been challenged in federal court. The Vermont law was sued by the U.S. Chamber of Commerce and the American Petroleum Institute on issues of preemption and preclusion by the Clean Air Act, as well as violations of due process, the Commerce Clause, and the Excessive Fines Clause. The New York law was sued by a coalition of twenty-two Attorneys General from conservative U.S. states on the same issues, as well as for violation of the Equal Protection Clause, the Takings Clause, and the Due Process and Takings Clauses of the New York Constitution. Complaint, Chamber of Commerce of the U.S. v. Moore, U.S. District Court, District of Vermont (2024), https://climatecasechart.com/wp-content/uploads/case-documents/2024/20241230_docket-224-cv-01513_complaint.pdf; "Vermont Is First State Sued Over 'Climate Superfund' Law," Bloomberg Law, December 31, 2024, <https://news.bloomberglaw.com/environment-and-energy/vermont-is-first-state-sued-over-its-climate-superfund-law>; Complaint in West Virginia v. James, U.S. District Court, N.D. New York (2025), <https://ago.wv.gov/Documents/Final%20Superfund%20Complaint.pdf>; "States Challenge New York's Climate Superfund Act," Sidley, February 12, 2025, <https://environmentalenergybrief.sidley.com/2025/02/12/states-challenge-new-yorks-climate-superfund-act/>.

A. Cost Recovery Laws Leverage Preexisting Legislation

As discussed above, CERCLA served as a foundational model for U.S. federal and state-level climate cost recovery efforts.⁵⁶ Indeed, at least one of these draft laws explicitly mentions existing state legislation that has held polluters “strictly liable without regard to fault for cleanup and repair of damages done by the substances they introduced.”⁵⁷ Similar mechanisms can take different forms depending on a jurisdiction’s legal traditions and history. This approach reflects a broader strategy of reinforcing legal continuity, ensuring that new laws are more readily enforceable.

The Philippines’ CLIMA Act exemplifies how cost recovery laws can be rooted in established legal frameworks by drawing on the country’s historical use of reparations boards. These include the Human Rights Victims’ Claims Board (HRVCB), established in response to violations committed under martial law during the Marcos dictatorship,⁵⁸ and the Marawi Compensation Board (MCB), established in response to those forcibly displaced during the 2017 armed conflict between the government and an Islamic State militant group.⁵⁹ The HRVCB deemed 11,103 claims as eligible for monetary reparations before it concluded operations in 2018.⁶⁰ The funds to compensate victims were drawn from the dictatorship’s foreign assets, which were seized after the courts found that President Marcos obtained such funds through corruption.⁶¹ The MCB, on the other hand, remains operational and has awarded nearly ₱1.8 billion in reparations as of April 2025.⁶² Funds for victims’ compensation are allocated by the Department of Budget and Management.⁶³ While MCB and the HRVCB funding sources differ from those of the CLIMA Act, these preexisting reparations boards provided a useful precedent in that they leveraged legal mechanisms to facilitate individual compensation claims predicated on harms caused by public and private actors.

Adapting cost recovery laws from existing precedents can enhance legitimacy, administrative feasibility, and political viability while allowing flexibility to innovatively address the unique nature of climate-related harms. This strategy reminds interested parties that local conditions and legislative precedents are key to crafting new legal solutions.

B. Legislators Use Climate Science, to the Extent Feasible, to Strengthen Bill Credibility

Climate science plays a meaningful, if at times implicit, role in climate change cost recovery laws by linking high-emitting entities to climate change-induced damage. The degree of its use in the statutory language varies, with a myriad of reasons for these differing approaches, ranging from legislative practice to strategic advocacy. For example, the proposed Philippine law cites climate science, including IPCC reporting predicated on attribution science, to support its claims of fossil fuel-driven climate impacts.⁶⁴ This inclusion is in line with the typical structure of Philippine legislation, which often includes a detailed Explanatory Note

⁵⁶ See footnote 11 and accompanying text.

⁵⁷ S.B. 682, pmb. (OR 2025).

⁵⁸ “About Us,” Human Rights Violations’ Victims Memorial Commission, accessed April 28, 2025, <https://hrvvc.gov.ph/about-us/>; “History,” Marawi Compensation Board, accessed April 28, 2025, <https://mcb.gov.ph/history/>.

⁵⁹ “About Us”; “History.”

⁶⁰ “Statement of the Commission on Human Rights on the End of Operations of the Human Rights Victims’ Claims Board,” *Commission on Human Rights*, May 18, 2018, <https://chr.gov.ph/statement-of-the-chr-on-the-end-of-operations-of-the-hrvcb/>.

⁶¹ “Five Things to Know about Martial Law in the Philippines,” Amnesty International, April 25, 2022, <https://www.amnesty.org/en/latest/news/2022/04/five-things-to-know-about-martial-law-in-the-philippines/>.

⁶² “Filing, Evaluation, and Adjudication Process,” Marawi Compensation Board, November 15, 2025, <https://mcb.gov.ph/filing-evaluation-and-adjudication-process/>.

⁶³ “Pangandaman Approves Release of P1 Billion Fund for Marawi Siege Victims,” Department of Budget and Management, accessed April 28, 2025, <https://www.dbm.gov.ph/index.php/management-2/2379-pangandaman-approves-release-of-p1-billion-fund-for-marawi-siege-victims>.

⁶⁴ H.B. 9609, “Explanatory Note,” § 5 (Philippines 2023).

section outlining the context of the bill and the need for a new law. Nevertheless, these varying uses demonstrate how climate science is an available tool for policymakers to deploy in various stages of the policymaking process.

Existing climate science, and attribution studies in particular, offer robust conclusions about the relationship between emissions and impacts on natural and human-made systems. These studies provide related confidence intervals, indicating the degree of certainty of the conclusions, which can be leveraged by policymakers and advocates to communicate the strength of the evidence undergirding their efforts. For example, a recent extreme weather event attribution study of the June 2021 heatwave that impacted the Pacific coast of the United States and Canada concluded “that the occurrence of a heat wave of the intensity experienced in the study area would have been virtually impossible without human-caused climate change.”⁶⁵ A county in Oregon has already leveraged this study in a civil lawsuit against oil and gas companies seeking damages,⁶⁶ and it remains at policymakers’ disposal in Oregon as they consider cost recovery legislation.

Beyond use in the legislative process, incorporating existing studies into the background or preamble section of future bills, as was done in the CLIMA Act, strengthens the scientific credibility of proposed cost recovery legislation.⁶⁷ This holds particularly true for jurisdictions with a legislative tradition of explaining the context that gives rise to a bill. This scientific credibility can also be strengthened by incorporating climate science into how laws are operationalized by requiring its use, as some U.S. bills do with their respective environmental protection agencies,⁶⁸ and as the Filipino CLIMA Act does with the Climate Change Reparations Board.⁶⁹ This typically involves directing agencies and reparations boards to use the best available science to conduct damage assessments and issue demands.⁷⁰ By utilizing peer-reviewed methodologies, governments can assign liability to major emitters according to their proportional contribution to climate change. This scientific approach strengthens the legal foundation of cost recovery measures and may enhance their credibility in judicial proceedings.⁷¹

Ultimately, however, local conditions must dictate how much climate science, particularly attribution science, should be included in cost recovery legislation. Although attribution science can provide robust and compelling evidence connecting emissions to climate damages, it can also inadvertently set high evidentiary burdens if required for claims in areas of the world where climate data is less accessible or where weather systems or types of extreme events lend themselves less readily to climate modeling.⁷² While the inclusion and use of existing attribution science can be useful, requiring new attribution science

⁶⁵ S.Y. Philip et al., “Rapid Attribution Analysis of the Extraordinary Heat Wave on the Pacific Coast of the US and Canada in June 2021,” *Earth System Dynamics* 13 (2022): 1689, <https://doi.org/10.5194/esd-13-1689-2022>.

⁶⁶ Second Amended Complaint in *Multnomah v. Exxon Mobil Corp.*, U.S. Court of Appeals for the Fourth Circuit (2024), https://climatecasechart.com/wp-content/uploads/case-documents/2024/20241007_docket-23CV25164-complaint.pdf.

⁶⁷ Jurisdictions may consider citing sources such as the following: Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (United Nations, 2023), https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf; B. Ekwurzel et al., “The Rise in Global Atmospheric CO₂, Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers,” *Climatic Change* 144, 2017: 579, <https://doi.org/10.1007/s10584-017-1978-0>.

⁶⁸ See S.B. 684, § 71371.3 (CA 2025); H.B. 6280, § 1(I) (CT 2025); S.B. 1652, § 225M-D(a)(1) (HI 2025); S.B. 588, §2 (c)-(e) (MA 2025); S.B. 149, § 2-1707(B)(1) (MD 2025); S.B. 2129, §76-0103 4(i) (NY 2024); S.B. 682, § 4(1) (OR 2025); S.B. 259, § 599a (VT 2023).

⁶⁹ The bill directs the Board to incorporate attribution science as a framework for claim adjudication and member selection. H.B. 9609, §§ 12, 14 (Philippines 2023).

⁷⁰ While the definition of best available science may vary depending on context, the Union of Concerned Scientists describes it as “the most reliable, valid, up-to-date, and relevant, empirical knowledge,” which inherently “relies on peer review, and draws on experts across disciplines.” Carly Phillips, “What Does ‘Best Available Science’ Mean?” Union of Concerned Scientists, last modified January 15, 2025, <https://blog.ucs.org/carly-phillips/what-does-best-available-science-mean/>.

⁷¹ For more on how due process challenges to climate change cost recovery laws based on arbitrariness may play out in the U.S. context, see Martin Lockman and Emma Shumway, “State ‘Climate Superfund’ Bills: What You Need to Know,” *Climate Law*, last modified March 14, 2024, <https://blogs.law.columbia.edu/climatechange/2024/03/14/state-climate-superfund-bills-what-you-need-to-know/>.

⁷² *The Role of Attribution Science in Legal Action on Loss and Damage*, (Climate Law Accelerator and The Union of Concerned Scientists, 2025), <https://clxtoolkit.com/publications/report-the-role-of-attribution-science-in-legal-action-on-loss-and-damage/>, 29–30.

as part of the implementation process should be weighed against the state of existing climate data in a given region and other local equity concerns.

C. Emission Thresholds for Responsible Parties Account for Market Dynamics

The cost recovery laws analyzed suggest that market dynamics were considered in formulating these policies. Notably, all U.S. cost recovery laws state that, to be subject to cost recovery payments, a party must be responsible for more than “one billion metric tons of emissions” during the relevant covered period.⁷³ According to this threshold, only thirty to forty of the largest, most profitable fossil fuel producers must pay into the fund, while many small companies that are responsible for relatively small percentages of emissions are excluded.⁷⁴ This approach not only provides efficiencies for the entities administering these policies but also considers how competitive markets price fuel.

If emission thresholds exclude smaller emitters, enforcement agencies avoid the administrative costs of issuing many additional cost recovery demands of relatively low amounts. By targeting only the dominant players in their respective markets, these cost recovery laws make a practical decision to focus administrative resources on companies with the largest potential cost recovery demands. Moreover, this threshold has an economic basis. Putting aside discussions of how the global market sets the price of crude oil and how assessments for past behavior do not increase the marginal cost of production,⁷⁵ this threshold creates conditions that should prevent companies that operate in competitive markets from inflating local consumer fuel prices.⁷⁶

For example, if Company A attempts to raise its prices to recoup the cost recovery demand paid to a given government and pass on those costs to customers, consumers will switch to the lower-priced competitor unaffected by cost recovery demands. Company A, seeing its demand and, therefore, profits decline, will lower its prices to the market rate. Assuming Company A is a sophisticated player in this market, given that it is theoretically subject to the cost recovery law, it will take this scenario into account before increasing prices. These market dynamics suggest that in selecting an emission threshold for responsible parties, scholars, advocates, and policymakers should take into account the universe of entities that potentially fall under the purview of the law and consider the practical and economic implications of their chosen threshold.

D. Covered Period Start Dates Align with a Global Understanding of Climate Change

⁷³ See figure 1.

⁷⁴ New York’s bill applies to only thirty to forty fossil fuel companies, the largest eight of which collectively earned \$389 billion in profits in 2022 alone. Emily Eisner, “Fact Sheet: Climate Change Superfund Act,” Fiscal Policy Institute, last modified July 24, 2024, <https://fiscalpolicy.org/fact-sheet-climate-change-superfund-act>.

⁷⁵ “Letter from Joseph Stiglitz, Economics Nobel Laureate and Professor at Columbia University, to Kathy Hochul, Governor of New York,” September 16, 2024, <https://makepolluterspay.net/nobel-prize-winning-economist-to-ny-gov-superfund-act-will-save-new-yorkers-money>. The cost recovery demands would likely be treated by oil companies as one-time fixed costs which they “are unable to pass on [] to consumers due to economic incentives and competition.” Together, these factors support the view that cost recovery demands should not affect consumer prices. Peter H. Howard and Minhong Xu, *Enacting the “Polluter Pays” Principle: New York’s Climate Change Superfund Act and Its Impact on Gasoline Prices*, New York University Institute for Policy Integrity, 2022: 1, 6–9, https://www.nypirg.org/climatechange/files/Final_Brief_MPP_Economics.pdf.

⁷⁶ Companies paying a lower cost recovery demand will be able to sell their products for a lower price, thereby out-competing any company that attempts to raise prices. Emily Eisner, “Fact Sheet: Climate Change Superfund Act,” Fiscal Policy Institute, last modified July 24, 2024, <https://fiscalpolicy.org/fact-sheet-climate-change-superfund-act>. According to Howard and Xu, “[t]he ability to retaliate would also be limited by competition.” Peter H. Howard and Minhong Xu, “Enacting the ‘Polluter Pays’ Principle: New York’s Climate Change Superfund Act and Its Impact on Gasoline Prices,” New York University Institute for Policy Integrity, 2022: 6–9, https://www.nypirg.org/climatechange/files/Final_Brief_MPP_Economics.pdf. According to Plattner, “[a] firm that faced a large assessment and sought to pass that cost along to consumers through higher prices would lose market share to firms that had small assessments or no assessment at all and maintained their prices.” Robert D. Plattner, “Coping With the Costs of Climate Change: Make the Polluters Pay,” *Tax Notes 105* (2022): 973, 977, <https://www.taxnotes.com/tax-notes-state/environmental-taxes/coping-costs-climate-change-make-polluters-pay/2022/08/29/7dyfz>.

Choosing a covered period—the years during which an entity’s emissions are relevant in calculating its liability—is a critical element of any climate change cost recovery law. Jurisdictions have adopted varied approaches to selected start dates, with many doing so to align the law with milestones in the global understanding of climate change. For instance, Massachusetts amended its bill to set the covered period to begin in 1995, the year the United Nations Framework Convention on Climate Change entered into force,⁷⁷ and California amended its covered period to start in 1990, when the first IPCC report was released.⁷⁸ Some jurisdictions may feel comfortable beginning their covered period sometime in the 1950s, the earliest point at which documentation exists that proves fossil fuel companies had knowledge of the climate risks of their products.⁷⁹ Ultimately, scholars, advocates, and policymakers should consider grounding the selection of the covered period’s start date in clear, evidence-based milestones related to public or industry knowledge of the causes of climate change. This approach strengthens both the normative and legal justifications for liability and may help defend against claims that the chosen period is arbitrary or unfair.

E. Bills Provide Specific Examples for the Use of Funds

All U.S. laws provide a detailed and nonexhaustive list of specific climate change projects to which cost recovery funds can contribute. These include both human-centered infrastructural and health projects, such as “making defensive upgrades to roads, bridges, railroads, and transit systems,”⁸⁰ nature-centered environmental projects, such as “restoring coastal wetlands and developing other nature-based solutions and coastal protections,”⁸¹ and reasonable administrative costs.⁸² Some bills also specify that a climate change adaptation project can include preventive health care programs and medical care treating illnesses or injuries, both “caused” and “aggravated by” the effects of climate change.⁸³ This expands the scope of potential fund uses and reflects the reality that climate change can both catalyze and multiply the negative impacts on nature and human-made systems. Moreover, this aligns with the findings of many attribution science studies that extreme weather is made more likely, or more severe, by emissions.⁸⁴

Such a level of specificity for fund usage serves both political and administrative functions, facilitating the passage and operationalization of climate cost recovery laws. By including tangible details on the specific types of projects that the funds will support, climate cost recovery bills are given a comprehensible, real-life purpose, which may resonate more with voters and lawmakers. Concrete benefits are a narrative tool that helps mobilize civil society organizations that may be involved in the drafting, passage, or publicization of the law.⁸⁵ Administratively, specificity on the use of funds ensures the law is grounded in actionable steps; government agencies tasked with managing the funds are provided a clear roadmap for efficient disbursement, thereby preventing the creation of slush funds used in discretionary ways that may not serve the intended purposes.⁸⁶

⁷⁷ Compare S.B. 588, § 1 (MA 2025) and Climate Change Adaptation Cost Recovery Act, S.B. 481, § 1 (MA 2023), <https://malegislature.gov/Bills/193/S481>; “United Nations Framework Convention on Climate Change,” May 9, 1992, <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

⁷⁸ Compare S.B. 684, § 71370 (CA 2025) and S.B. 1497, § 71370 (CA 2024),

https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202320240SB1497; Intergovernmental Panel on Climate Change, *Climate Change: The IPCC 1990 and 1992 Assessments*,

https://www.ipcc.ch/site/assets/uploads/2018/05/ipcc_90_92_assessments_far_full_report.pdf.

⁷⁹ Dharna Noor, “Big Oil Firms Knew of Dire Effects of Fossil Fuels as Early as 1950s, Memos Show,” *The Guardian*, November 12, 2024, <https://www.theguardian.com/us-news/2024/nov/12/big-oil-fossil-fuel-warning>.

⁸⁰ S.B. 259, § 596 (VT 2023).

⁸¹ S. 824, § 76-0101 (NY 2025).

⁸² H.B. 6280, § 1(j) (CT 2025).

⁸³ S. 588, § 1 (MA 2025).

⁸⁴ “World Weather Attribution,” World Weather Attribution, accessed April 25, 2025, <https://www.worldweatherattribution.org/about/>.

⁸⁵ “World Weather Attribution.”

⁸⁶ “World Weather Attribution.”

It is worth noting that many of the cost recovery laws specify the use of funds not only for projects geared toward human benefit but also for those that benefit nature. New York’s law, for example, includes “restoring coastal wetlands and developing other nature-based solutions and coastal protections[,] addressing urban heat island effects through green spaces, urban forestry, and other interventions[,] and responding to harmful algal blooms, loss of agricultural topsoil, and other climate-driven ecosystem threats to forests, farms, fisheries, and food systems.”⁸⁷ Similarly, Oregon’s law explicitly calls for the state’s resilience implementation strategy to include “[p]ractices for utilizing nature-based solutions” that “utilize or mimic nature or natural processes and functions.”⁸⁸ While these projects certainly benefit humans, the inclusion of nature-based solutions and projects that also benefit ecosystems represents a more holistic approach to climate change adaptation. Moreover, these examples provide agencies implementing such laws with a helpful reminder to consider the ecosystems and nonhuman living beings within their jurisdictions that are also affected by climate change.

F. Requirements for Fund Usage Consider Disproportionately Impacted Communities

As previously noted, several U.S. laws specify that a certain percentage of the funds must be directed toward disadvantaged communities that are disproportionately impacted by climate change. While some laws, such as New York’s, are predicated on preexisting legal obligations at the state level,⁸⁹ others have followed federal policy directives to address disparities in underserved communities, such as the Biden Administration’s Justice40 Initiative.⁹⁰ The Philippines’ CLIMA Act adopts a similar narrative in justifying its cost recovery efforts by framing the country as an economically disadvantaged and climate-vulnerable state within the international community, deserving of particular focus and reparations.⁹¹ This issue is important for those who may be considering climate cost recovery laws within their jurisdictions, as the principles of environmental justice can help guide funding decisions and ensure investments are made in communities most impacted by climate change.⁹² Further, it is especially relevant for laws structured such that the government, as opposed to individual persons, is the recipient and user of the funds.

G. Legislative Provisions Engage Coalition Partners and Reflect Diverse Priorities

Legislative provisions in cost recovery laws reflect engagement with a broad range of interested stakeholders, including labor unions, environmental justice organizations, youth activists, public health advocates, and traditional climate groups. For instance, the New York law caters to labor unions by including provisions ensuring that projects funded through cost recovery mechanisms comply with prevailing wage protections.⁹³ Other laws include civil society and concerned citizens in the operationalization of the cost recovery fund. The Oregon law, for example, tasks an Environmental Quality Commission, comprising five state citizens and representatives of environmental civil society groups, with implementing various aspects of the law, including the liability of responsible parties using the best available

⁸⁷ S.B. 824, § 76-0101 (NY 2025).

⁸⁸ S.B. 682, §§ 2(14), 4(2)(a) (OR 2025).

⁸⁹ S.B. 682, §§ 2(14), 4(2)(a) (OR 2025).

⁹⁰ “Justice40: A Whole-of-Government Initiative,” The White House, accessed April 28, 2025, <https://bidenwhitehouse.archives.gov/environmentaljustice/justice40>.

⁹¹ H.B. 9609, Explanatory Note (Philippines 2023).

⁹² See, for example, E. Tendayi Achiume, “Report of the Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance on Ecological Crisis, Climate Justice and Racial Justice,” October 25, 2022, <https://www.ohchr.org/en/documents/thematic-reports/a77549-report-special-rapporteur-contemporary-forms-racism-racial>. In this report, the Special Rapporteur notes the linkages between racialized communities and ecological discrimination, which lead to certain areas experiencing an outsized climate change impact.

⁹³ S. 824, §76-0105(3)(a) (NY 2025).

science, rulemaking procedures to collect cost recovery demands, and funds disbursement for climate change adaptation projects.⁹⁴ These partnerships help shape legislative provisions that reflect diverse priorities and forge community buy-in from a wide range of stakeholders. By proactively engaging coalition partners, addressing their concerns in the legislative text, and even involving them in operationalizing the law itself, drafters can build broader support and ensure that cost recovery laws advance multiple social and economic justice goals alongside climate accountability.

IV. Conclusion

As climate change accelerates, so too will its economic and noneconomic costs. From supercharged hurricanes in the Caribbean to devastating heatwaves in the Sahel,⁹⁵ “climate change will severely test the ability of [local] governments to govern, including the essential task of raising the new revenues needed to build an infrastructure capable of protecting the health and welfare of its citizens.”⁹⁶ The question of who pays for these climate costs is increasingly relevant and urgent. Cost recovery laws offer a compelling mechanism to shift the burden of climate change, at least in part, from taxpayers to the largest contributors to the climate crisis.

This nascent yet growing body of climate change cost recovery legislation provides valuable insights. The Philippine and U.S. federal and state laws highlight the importance of anchoring new legislation in established legal frameworks, incorporating climate science, duly considering market dynamics, basing covered periods on milestones in knowledge about climate change, specifying the strategic use of funds, considering disproportionately impacted communities, and engaging coalition partners. As scholars, advocates, and policymakers develop climate-related legal frameworks, they should consider these models to ensure that the financial burden of climate change is borne by those most responsible rather than the communities already suffering its devastating effects.

⁹⁴ S.B. 682, § 4 (OR 2025).

⁹⁵ For instance, scientists found that heavy rainfall from Hurricane Milton was 20–30 percent more intense and twice as likely due to human-caused climate change. “Yet another hurricane wetter, windier and more destructive because of climate change,” World Weather Attribution, last modified October 11, 2024, <https://www.worldweatherattribution.org/yet-another-hurricane-wetter-windier-and-more-destructive-because-of-climate-change/>. They also found that the extreme heatwave in the Sahel in March and April of 2024 would have been “impossible to occur” without global warming. “Extreme Sahel Heatwave that Hit Highly Vulnerable Population at the End of Ramadan would not Have Occurred without Climate Change,” World Weather Attribution, last modified April 18, 2024, <https://www.worldweatherattribution.org/extreme-sahel-heatwave-that-hit-highly-vulnerable-population-at-the-end-of-ramadan-would-not-have-occurred-without-climate-change/>.

⁹⁶ Robert D. Plattner, “Coping With the Costs of Climate Change: Make the Polluters Pay,” Tax Notes, 105 (2022), <https://www.taxnotes.com/tax-notes-state/environmental-taxes/coping-costs-climate-change-make-polluters-pay/2022/08/29/7dyfz>.

