

A background image of an industrial facility, likely a refinery or power plant, with several tall smokestacks emitting plumes of smoke. The scene is set against a dramatic sunset sky with orange and yellow light breaking through dark, heavy clouds. The foreground shows a field of low-lying vegetation, possibly covered in frost or snow, in a cool blue tone.

Loss and Damage Litigation Against Carbon Majors

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I. Introduction

Around 100 companies are responsible for more than two-thirds of the greenhouse gas (GHG) emissions that are causing climate change.¹ These companies, known as the “Carbon Majors,” profited enormously from products—oil, gas, coal, and cement—that destabilized the global climate system. Many of these companies also engaged in a coordinated effort to spread misinformation about the dangers of climate change and sow doubt about climate science.² Although communities—particularly in the Global South—are already experiencing loss and damage from climate change impacts,³ most of these companies continue to pollute the atmosphere with GHGs. Despite their outsized contributions, to date, no Carbon Major has been held accountable for the substantial and mounting economic and non-economic losses resulting from climate change. Advocates and governments, however, are hoping to change that through legal action. Around the world, plaintiffs have brought over 50 cases demanding compensation for loss and damage from climate change.⁴ Most of these cases have been filed

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¹ Carbon Majors, *The Carbon Major Database Launch Report* (April 2024), https://carbonmajors.org/site/data/000/027/Carbon_Majors_Launch_Report.pdf; see also Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010*, 122 *CLIMATE CHANGE* 229 (2014).

² Kathy Mulvey & Seth Shulman, *The Climate Deception Dossiers: Internal Fossil Fuel Industry Memos Reveal Decades of Corporate Disinformation* (Union of Concerned Scientists, 2015), <https://www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf>.

³ Bethuel Sibongiseni Ngcamu, *Climate Change Effects on Vulnerable Populations in the Global South: A Systematic Review*, 118 *NAT. HAZARDS* 977 (2023).

⁴ CLIMATE LAW ACCELERATOR (CLX) DATABASE OF LOSS AND DAMAGE CLIMATE CASES, https://docs.google.com/spreadsheets/d/1kjr-GfCk9o-Ldaiz-UDILR3Kgy_3SVcHZt1V9pE6M7w/edit?gid=0#gid=0 (last visited Sep. 28, 2024) (hereinafter CLX L&D DATABASE).

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by state and local governments in the United States, with a notable few filed in Europe by plaintiffs from the Global South.

Loss and damage, a term that emerged from international climate negotiations, refers to harms caused by climate change.⁵ These harms can be economic, such as loss of livelihood or property, and non-economic, such as loss of cultural heritage and biodiversity.⁶ Loss and damage includes future harms that cannot be avoided by adaptation to climate change or the mitigation of GHG emissions.⁷ The NYU Climate Law Accelerator's (CLX) Database of Loss and Damage Cases defines loss and damage cases as those that substantively involve the remedying of harms caused by climate change impacts before judicial (domestic courts, international criminal courts, etc.) or quasi-judicial bodies (UN Human Rights Committee, national human rights commissions, etc.). These cases are differentiated from mitigation cases, where plaintiffs seek remedies for a failure to reduce GHG emissions, and adaptation cases, where plaintiffs seek remedies for a failure or inability to adapt to expected climate change impacts in the future. Loss and damage cases may also seek remedies related to mitigation or adaptation, but the database does not include cases that solely seek such forward-looking remedies.

Drawing on the CLX Database of Loss and Damage Cases⁸ and conversations with loss and damage litigators, we distill key strategies and challenges that extend across the field of loss and damage litigation against Carbon Majors. Not all loss and damage cases are against Carbon Majors. Indeed, some cases seek reparations from governments rather than Carbon

⁵ Karen E. McNamara & Guy Jackson, *Loss and Damage: A Review of the Literature and Directions for Future Research*, 10(2) WIREs CLIM. CHANGE 1 (2018).

⁶ *Id.*

⁷ *Id.*

⁸ CLX L&D DATABASE, *supra* note 4.

The recently established UN Loss and Damage Fund creates an accountability gap between polluter governments and polluter corporations, heightening the importance of litigation against Carbon Majors.

Majors,⁹ but our analysis focuses on cases against these entities for a few reasons. Most loss and damage cases have been brought against Carbon Majors, creating an analytically distinct subset of climate change cases. Additionally, the recently established UN Loss and Damage Fund will partly address government accountability for climate change, though these governments have insisted that their donations to the fund are voluntary rather than based on their responsibility for climate change.¹⁰ This creates an accountability gap between polluter governments and polluter corporations, heightening the importance of litigation against Carbon Majors.¹¹

This analysis highlights the various strategic decisions that plaintiffs make in loss and damage litigation: key choices about whom they will sue (defendants), their theory of liability, how they will prove their case (evidence), what they will ask for (remedies), and where they will litigate (jurisdiction). We end this analysis with a discussion of some of the challenges that litigants may face in suing Carbon Majors for climate change-induced loss and damage. While we focus on these categories as critical points of distinction and commonality, plaintiffs certainly consider a variety of other factors when building and litigating their cases. In framing the extant loss and damage jurisprudence as a set of strategic choices, we hope that this review will help researchers, practitioners, impacted communities, and government agencies better understand the litigation efforts aimed at holding Carbon Majors accountable for climate change impacts.

⁹ This includes cases brought by climate-impacted individuals seeking refuge in less climate-vulnerable countries, such as Human Rights Committee, *Ioane Teitiota v. New Zealand*, UN Doc. CCPR/C/127/D/2728/2016 (2016).

¹⁰ Gabrielle See, *US Climate Envoy Pushes to Weaken Developed Countries' Legal Obligation to Contribute to Loss and Damage Fund*, ECOBUSINESS (Nov. 13, 2023), <https://www.eco-business.com/news/us-climate-envoy-pushes-to-weaken-developed-countries-legal-obligation-to-contribute-to-loss-and-damage-fund/>.

¹¹ For a comprehensive list of loss and damage cases brought against governments, please see the CLX L&D DATABASE, *supra* note 4.

II. Carbon Majors as Defendants

Loss and damage litigation has focused on Carbon Majors because these companies bear a particular responsibility for climate change. In a groundbreaking 2013 study, Richard Heede identified the Carbon Majors and quantified their contribution to climate change, finding that just 90 industrial producers were responsible for 63% of global cumulative CO₂ emissions between 1854 and 2010.¹² In an updated report, researchers found that just 78 companies were responsible for 70% of global cumulative CO₂ emissions between 1751 and 2022.¹³ These studies serve as critical evidence in loss and damage litigation, allowing plaintiffs to argue that the Carbon Majors caused loss and damage through their emissions. This evidence is discussed further in Section V below.

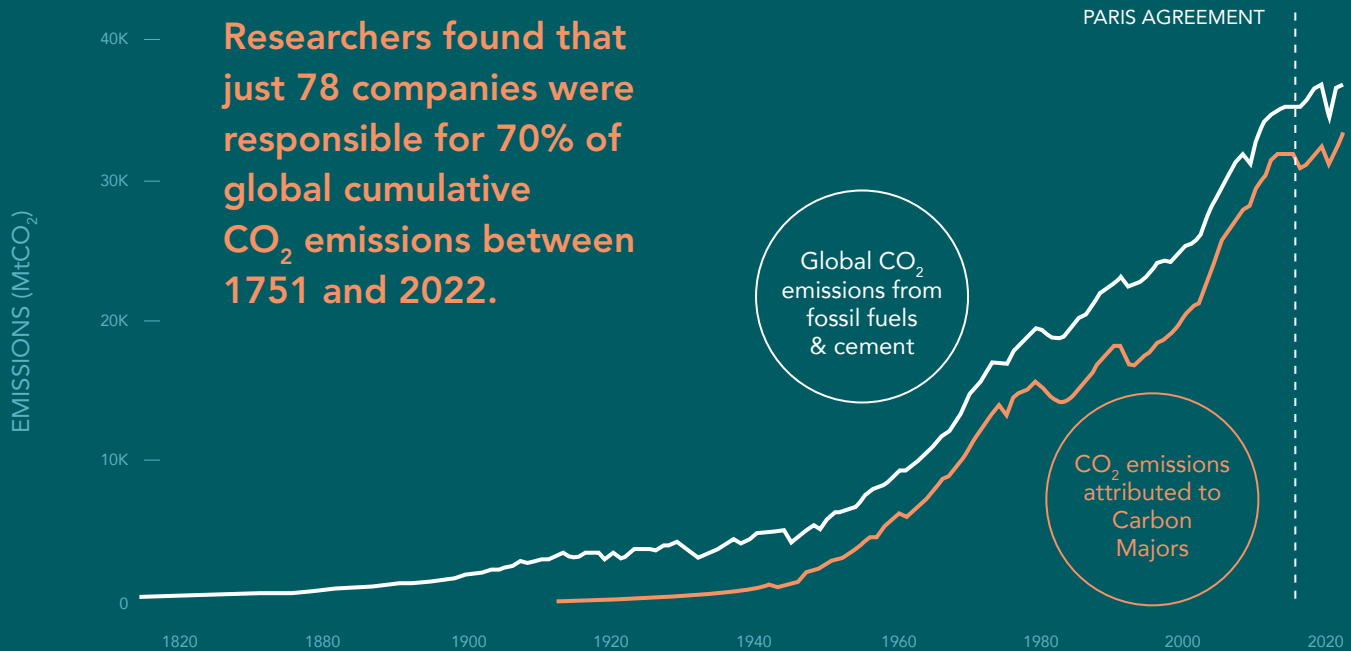
Different Carbon Majors bear different levels of culpability for climate change. Some—such as Chevron, ExxonMobil, Saudi Aramco, and BP—are responsible for far more emissions than others. Approximately 12% of global emissions are collectively attributable to these four companies.¹⁴ Others, such as Santos and

¹² Richard Heede, *supra* note 1.

¹³ Carbon Majors, *supra* note 1, at 27.

¹⁴ *Id.* (calculated by adding together the individual contributions from each of these companies).





Source: CARBON MAJORS, THE CARBON MAJORS DATABASE LAUNCH REPORT (2024)

Adani Enterprises, contributed less than 1% of global emissions.¹⁵ Disparity among Carbon Majors can also be seen in their efforts to spread disinformation about climate change. For example, former oil executives have credited ExxonMobil with leading an international effort to cast doubts on climate science.¹⁶ As discussed in Section III below, many loss and damage cases target companies that allegedly participated in a coordinated disinformation campaign, but the public has limited information about exactly which companies were involved. To address this discrepancy, a number of plaintiffs name unknown defendants (listed as “Does”) so that they can include additional companies as they uncover incriminating evidence during the proceedings.¹⁷

A company’s perceived degree of culpability may affect the likelihood that courts will hold them accountable. For example, courts may be less likely to find that smaller emitters caused or substantially contributed to climate change, a key element of loss and damage claims. Further, courts may be more inclined to rule against

¹⁵ *Id.*

¹⁶ Bernard Tramier, former environmental director of a French oil company, recalled that “Exxon had taken hold of the issue, and that suited us, because we [French companies such as Elf and Total] did not have the knowledge or the means to have weight in the scientific community, the Intergovernmental Panel on Climate Change [IPCC], or the UN process. [...] We were a follower of Exxon [...] we agreed that we didn’t know enough [scientifically] for emission reductions or [carbon] taxes to be enacted, and we let Exxon do the rest.” Christophe Bonneuil et al., *Early Warnings and Emerging Accountability: Total’s Responses to Global Warming, 1971–2021*, 71 *GLOB. ENV’T. CHANGE* 1, 5 (2021).

¹⁷ See e.g., Complaint, *City of Imperial Beach v. Chevron Corp.*, No. C17-01227 (Cal. Super. Ct., 2017); Complaint, *County of Santa Cruz v. Chevron Corp.*, No. 17CV03242 (Cal. Super. Ct., 2018); Complaint, *Pacific Coast Federation of Fishermen’s Associations, Inc. v. Chevron Corp.*, No. CGC-18-571285 (Cal. Super. Ct., 2018); Complaint, *Rhode Island v. Chevron Corp.*, No. PC-2018-4716 (R.I. Super. Ct., 2018); Complaint, *King County v. BP p.l.c.*, No. 18-2-11859-0 (Wash. Super. Ct., 2018).

or impose harsher penalties on companies that knowingly polluted the atmosphere and stalled climate action through deception. Additionally, a court may be more likely to find that a plaintiff's injuries were reasonably foreseeable when presented with evidence that the defendant had advance knowledge of climate change. These considerations help to explain the particular focus on Carbon Majors in loss and damage litigation, as compared to other companies.¹⁸

A defendant's emissions may also affect the damages that plaintiffs can recover from them. In a number of cases, plaintiffs seek to hold joint wrongdoers fully liable for their injuries (known as joint and several liability or liability *in solidum*), which would allow them to recover fully from a single Carbon Major.¹⁹ In other cases, plaintiffs seek to hold Carbon Majors proportionally liable for their specific contribution to climate change. In *Lliuya v. RWE*, a Peruvian farmer is suing the German energy company RWE for a portion of the cost of repairing an impairment of his land resulting from the risk of an overflowing glacial lake.²⁰ The plaintiff, Saúl Lliuya, argues that RWE should be liable for approximately 0.47% of the overall cost to repair the impairment (€17,000), which is equivalent to RWE's contribution to global emissions.²¹

In *Lliuya v. RWE*, the plaintiff argues that RWE should be liable for approximately 0.47% of the overall cost to repair the impairment to his property (€17,000), which is equivalent to RWE's contribution to global emissions.

Thus far, plaintiffs have focused on privately owned European and American Carbon Majors, leaving aside state-owned entities and companies in the Global South. This may be because plaintiffs believe that cases against these companies are stronger, given that they bear the greatest responsibility for climate change and are headquartered in those jurisdictions. The focus on suing privately owned Western companies in many ways also mirrors the wider discourse on loss and damage, which has centered on the outsized carbon footprint of Western countries, particularly the United States.²² Nevertheless, companies based in the Global North are not the only large emitters. Indeed, States such as Saudi Arabia, Iran, Russia, and the United Arab Emirates own some of the largest emitters.²³ Cases against these state-owned entities may be less common for several reasons. Courts in authoritarian countries are less likely to rule against government-owned companies,

¹⁸ Some early loss and damage cases, such as *Connecticut v. American Electric Power* and *California v. General Motors*, focused on car and energy companies that were perceived to be major emitters. Other cases, such as *Native Village of Kivalina v. ExxonMobil* and *Comer v. Murphy Oil*, challenged a Carbon Major and a range of energy and fossil fuel companies. However, more recent loss and damage cases have primarily focused on Carbon Majors and their subsidiaries. This trend emerged after Richard Heede published the Carbon Majors dataset in 2014 and further information about the fossil fuel industry's disinformation campaign came to light. For a complete list of named defendants in loss and damage litigation, see the CLX L&D DATABASE, *supra* note 4.

¹⁹ See, e.g., Complaint, *Native Village of Kivalina v. ExxonMobil Corp.*, No. 12-1072 (U.S., 2008), <https://climatecasechart.com/case/native-village-of-kivalina-v-exxonmobil-corp/>; Complaint, *City of Oakland v. BP p.l.c.*, No. 22-16810, 22-16812, (9th Cir., 2017), <https://climatecasechart.com/case/people-state-california-v-bp-plc-oakland/>.

²⁰ Complaint, *Lliuya v. RWE AG*, Landgericht Essen [Regional Court of Essen], Nov. 23, 2015, Case No. 2 O 285/15 (Ger.)

²¹ *Id.*, at 18, 20 (citing Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010*, 122 CLIMATE CHANGE 229 (2014).

²² Simon Evans, *Analysis: Which Countries Are Historically Responsible for Climate Change?*, CARBON BRIEF (Oct. 5, 2021), <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>.

²³ Carbon Majors, *supra* note 1.

particularly when they play such prominent roles in the country's economy. Similarly, sovereign immunity may prevent courts in democratic countries from exercising jurisdiction over companies owned by foreign governments.²⁴ Given the nascent state of this field, it remains to be seen whether state-owned Carbon Majors will continue to be left out of this type of litigation.²⁵

Some cases target dozens of Carbon Majors,²⁶ while others involve only one.²⁷ Suing multiple defendants may offer certain advantages; for example, it can increase recovery prospects by maximizing the chance that at least one defendant will be held accountable. It can also increase a plaintiff's recovery if the court finds that the defendants are joint and severally, rather than individually, liable. However, suing multiple defendants also makes the case more costly and complex. This may help to explain why well-resourced government plaintiffs have sued dozens of companies, while plaintiffs represented by NGOs have sued only one company.

For legal and practical reasons, multinational companies are only subject to suit in certain jurisdictions. These considerations, discussed in part VI below, may play a key role in plaintiffs' choice of defendants.

²⁴ Andrew Dickinson, *State Immunity and State-Owned Enterprises*, 10 BUS. L. INT'L 97 (2009).

²⁵ For a discussion of this issue, see Ashley Otilia Nemeth & Adam Reynolds, *State-owned Carbon Majors Should Face Loss and Damage Litigation*, OPEN GLOBAL RIGHTS (Nov. 25, 2024), <https://www.openglobalrights.org/state-owned-carbon-majors-should-face-loss-and-damage-litigation/>.

²⁶ See, e.g., Complaint, Delaware v. BP America Inc., No. 22-1096 (3d Cir., 2020), <https://climatecasechart.com/case/state-v-bp-america-inc/>; Complaint, State of Minnesota v. American Petroleum Institute, No. 0:20-cv-01636 (D. Minn. 2020), <https://climatecasechart.com/case/state-v-american-petroleum-institute/>; Complaint, County of Multnomah v. Exxon Mobil Corp., Bottom of FormNo. 23CV25164 (Or. Cir. Ct, June 22, 2023), <https://climatecasechart.com/case/county-of-multnomah-v-exxon-mobil-corp/>; Complaint, City of New York v. BP p.l.c., No. 18-2188 (2d Cir., 2018), <https://climatecasechart.com/case/city-new-york-v-bp-plc/>.

²⁷ See, e.g., Hugues Falys, FIAN, Greenpeace, Ligue des droits humains v. TotalEnergies (The Farmer Case) (2024), <https://climatecasechart.com/non-us-case/hugues-falys-fian-greenpeace-ligue-des-droits-humains-v-totalenergies-the-farmer-case/> (no case documents available); Asmania et al. v. Holcim (2022), <https://climatecasechart.com/non-us-case/four-islanders-of-pari-v-holcim/> (no case documents available); Lliuya, *supra* note 20.

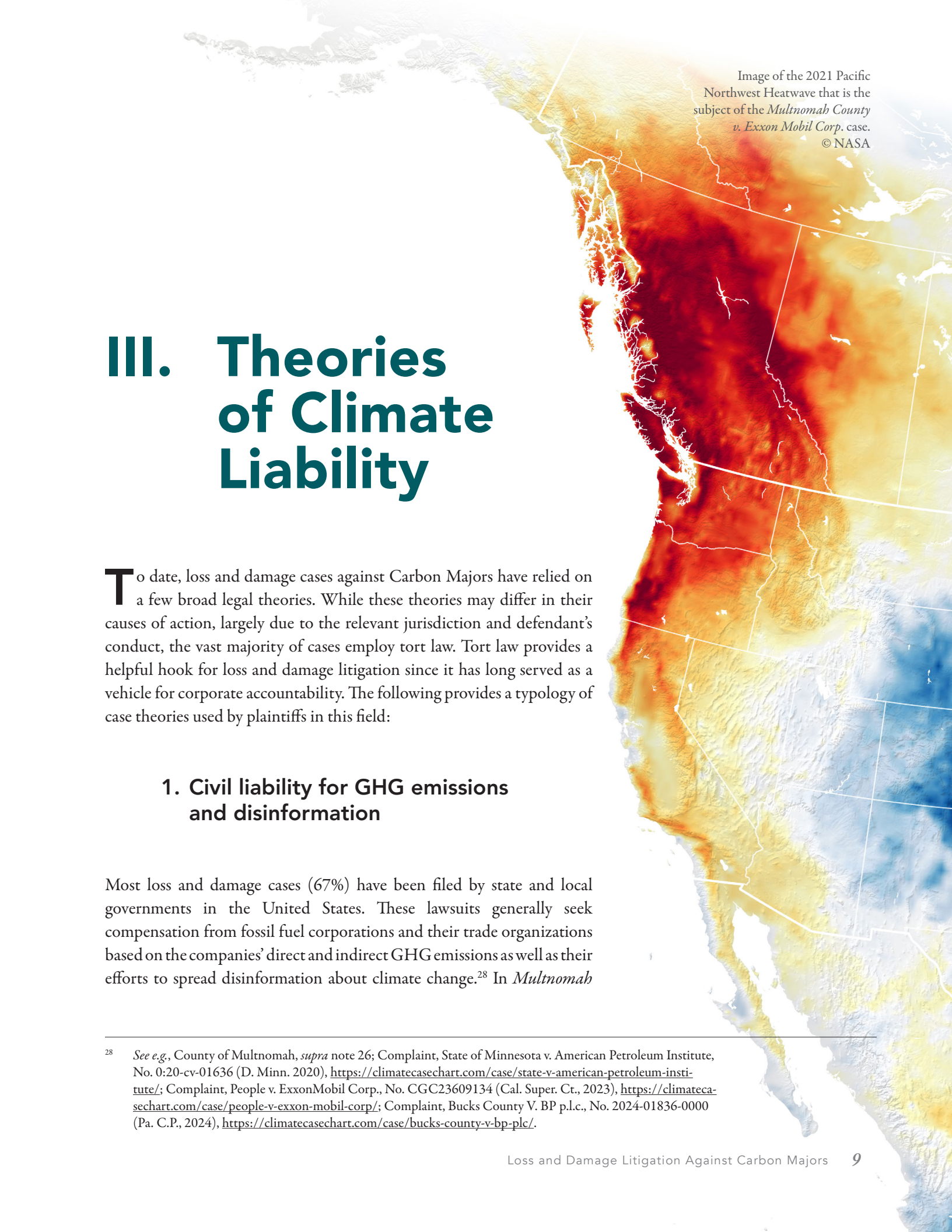


Image of the 2021 Pacific Northwest Heatwave that is the subject of the *Multnomah County v. Exxon Mobil Corp.* case.
© NASA

III. Theories of Climate Liability

To date, loss and damage cases against Carbon Majors have relied on a few broad legal theories. While these theories may differ in their causes of action, largely due to the relevant jurisdiction and defendant's conduct, the vast majority of cases employ tort law. Tort law provides a helpful hook for loss and damage litigation since it has long served as a vehicle for corporate accountability. The following provides a typology of case theories used by plaintiffs in this field:

1. Civil liability for GHG emissions and disinformation

Most loss and damage cases (67%) have been filed by state and local governments in the United States. These lawsuits generally seek compensation from fossil fuel corporations and their trade organizations based on the companies' direct and indirect GHG emissions as well as their efforts to spread disinformation about climate change.²⁸ In *Multnomah*

²⁸ See e.g., County of Multnomah, *supra* note 26; Complaint, State of Minnesota v. American Petroleum Institute, No. 0:20-cv-01636 (D. Minn. 2020), <https://climatecasechart.com/case/state-v-american-petroleum-institute/>; Complaint, People v. ExxonMobil Corp., No. CGC23609134 (Cal. Super. Ct., 2023), <https://climatecasechart.com/case/people-v-exxon-mobil-corp/>; Complaint, Bucks County V. BP p.l.c., No. 2024-01836-0000 (Pa. C.P., 2024), <https://climatecasechart.com/case/bucks-county-v-bp-plc/>.

County v. Exxon Mobil, for example, a county in the state of Oregon is seeking \$50 million for past damages related to a 2021 heatwave, \$1.5 billion for future damages, and at least \$50 billion for an abatement fund.²⁹ The causes of action include intentional and negligent creation of public nuisance, negligence, fraud and deceit, and trespass, predicated in part on the defendants' deception regarding the risks of fossil fuels.³⁰

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The cases in this category broadly argue that fossil fuel corporations are liable for loss and damage caused by climate change because they produced, promoted, and sold large quantities of fossil fuels while actively concealing the risks associated with pollution from these products. The lawsuits claim that fossil fuel corporations caused climate change impacts by not only selling the products that polluted the atmosphere but also by spreading misinformation about climate change and undermining climate science. They allege that the companies coordinated a disinformation campaign that successfully deceived the public about the dangers of climate change and thereby undermined public support for the regulation of GHG emissions.³¹

These cases rely on common law tort claims, most commonly public nuisance, private nuisance, product liability for failure to warn, product liability for design defect, and trespass. Many cases also raise claims based on alleged statutory violations, particularly violations of consumer protection laws. In one novel case, a class of Puerto Rican municipalities allege that fossil fuel companies violated the Racketeer Influenced and Corrupt Organizations (RICO) Act, which imposes civil liability for a pattern of criminal activity.³² The vast majority of these cases have been brought in state courts in an effort to avoid negative federal court precedents.³³ The federal courts have dismissed a number of climate change cases, including loss and damage cases like *Native Village of Kivalina v. ExxonMobil* and *City of New York v. BP*.³⁴

2. Civil liability based solely on GHG emissions

A smaller cohort of cases seek compensation from Carbon Majors based solely on their direct and indirect GHG emissions. These cases argue that Carbon Majors are responsible for climate change impacts based on their share of GHG emissions, including those caused by the end use of their products (known as Scope 3

²⁹ County of Multnomah, *supra* note 26.

³⁰ County of Multnomah, *supra* note 26.

³¹ For a discussion of how plaintiffs may prove that climate deception impacted public perceptions and contributed to inaction on climate change, see Jessica Wentz & Benjamin Franta, *Liability for Public Deception: Linking Fossil Fuel Disinformation to Climate Damages* 53 ENV'T. L. REPORTER 10995 (2022).

³² Complaint, *Municipalities of Puerto Rico v. ExxonMobil*, No. 3:22-cv-01550 (D.P. R., 2022), <https://climatecasechart.com/case/municipalities-of-puerto-rico-v-exxon-mobil-corp/>.

³³ Karen C. Sokol, *Seeking (Some) Climate Justice in State Tort Law*, 95 WASH. L. REV. 1383 (2020).

³⁴ *Native Vill. of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849 (9th Cir. 2012) (affirming district court's decision to dismiss the case for lack of subject matter jurisdiction); *City of N.Y. v. Chevron Corp.*, 993 F.3d 81 (2d Cir. 2021) (affirming district court's decision to dismiss the case for lack of subject matter jurisdiction).

emissions). Two of the most notable cases taking this approach were brought by plaintiffs from the Global South in European courts.

The plaintiff in the *Lliuya v. RWE* case discussed above argues that RWE helped cause the impairment to his land by substantially contributing to the global accumulation of GHGs, which caused glacial melt in Lliuya's region of Peru.³⁵ The second case, *Asmania v. Holcim*, involves four Indonesian islanders suing the Swiss cement producer and Carbon Major Holcim for climate change impacts on their island, such as sea-level rise and flooding.³⁶ They are similarly asking for proportional compensation based on Holcim's contribution to global cumulative GHG emissions, a reduction of current emissions, and assistance with adapting to climate change. These cases commonly rely on tort claims, most often negligence and nuisance. In addition to *Lliuya* and *Asmania*, a handful of U.S. cases took this approach in the 2000s.³⁷ However, all of these cases were dismissed.

3. Criminal liability

Some advocates argue that Carbon Majors—and decision-making bodies or individuals within these companies—should be held criminally liable for causing climate change impacts. In a novel case, *BLOOM v. TotalEnergies*, eight victims of extreme weather disasters and three organizations filed a criminal complaint against the directors and main shareholders of TotalEnergies, a French energy company and Carbon Major.³⁸ Each of the individual plaintiffs suffered personal harm from an extreme weather event. For example, two plaintiffs lost their mother to devastating flooding in France, while another plaintiff lost her sister to flooding in Pakistan.³⁹ The plaintiffs argue that the directors and main shareholders of TotalEnergies committed the crimes of

In NZ Students for Climate Solutions and UK Youth Climate Coalition v. Board of BP, a youth coalition argues that climate change constitutes an “inhumane act” barred by the Rome Statute because it is inflicting, and will continue to inflict, mass suffering on civilian populations.

³⁵ R. F. Stuart-Smith et al., *Increased Outburst Flood Hazard from Lake Palcacocha Due to Human-Induced Glacier Retreat*, 14 NAT. GEOSCI. 85, 85–90 (2021) <https://doi.org/10.1038/s41561-021-00686-4>.

³⁶ Press Release, An Island Demands Justice, Call for Climate Justice (Jul. 12, 2022), https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2022/20220712_17478_press-release-2.pdf.

³⁷ See, e.g., Complaint, Native Village of Kivalina v. ExxonMobil Corp., No. 12-1072 (U.S., 2008), <https://climatecasechart.com/case/native-village-of-kivalina-v-exxonmobil-corp/>; Complaint, Comer v. Murphy Oil U.S.A., Inc., No. 12-60291 (5th Cir., 2011), <https://climatecasechart.com/case/comer-v-murphy-oil-usa-inc/>. This approach was also taken in *Connecticut v. American Electric Power* and *California v. General Motors*, which involved energy companies and car companies, respectively, rather than Carbon Majors. See Complaint, Connecticut v. American Electric Power Co., No. 04 Civ. 5669, 04 Civ. 5670 (S.D.N.Y., 20014) <https://climatecasechart.com/case/american-electric-power-co-v-connecticut/>; Complaint, California v. General Motors Corp., No. 07-16908 (9th Cir., 2006), <https://climatecasechart.com/case/california-v-gm-corp/>.

³⁸ BLOOM and Others v. TotalEnergies (2024), <https://climatecasechart.com/non-us-case/bloom-and-others-v-totalenergies/> (no case documents available).

³⁹ Press Release, NGOs and Climate Change Victims File Criminal Case Against TotalEnergies Board of Directors and Shareholders (May 2023) 10, https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2024/20240521_68903_press-release-1.pdf.



Image of the 2022 historic floods in Pakistan that form part of the *BLOOM v. TotalEnergies* case.
© European Union, 2022/Abdul Majeed

“deliberately endangering the lives of others, involuntary manslaughter, neglecting to address a disaster, and damaging biodiversity” by knowingly contributing to climate change.⁴⁰ While no criminal cases have been filed in the United States, where most loss and damage cases are, advocates have begun to call for government prosecutors to charge Carbon Majors with homicide for deaths caused by climate change impacts.⁴¹

Criminal law has also been leveraged in international fora. In 2022, two youth groups asked the Office of the Prosecutor of the International Criminal Court to investigate whether senior BP executives committed a crime against humanity by knowingly polluting the atmosphere with GHG emissions while sowing doubt about climate change.⁴² The youth coalition argues that climate change constitutes an “inhumane act” barred by the Rome Statute because it is inflicting, and will continue to inflict, mass suffering on civilian populations. They note that this climate-induced suffering mirrors the criminal acts enumerated in the statute, such as causing widespread death, injury, forced displacement, and persecution.⁴³

⁴⁰ *Id.* at 3.

⁴¹ Dharna Noor, *Fossil Fuel Firms Could Be Tried in Us for Homicide Over Climate-related Deaths, Experts Say*, THE GUARDIAN (Mar. 21, 2024, 7 AM), <https://amp.theguardian.com/us-news/2024/mar/21/fossil-fuel-companies-homicide-climate-deaths-lawsuit>; see also Dharna Noor, *Survivors of Climate Disasters Demand Us Inquiry Into Big Oil’s ‘Climate Crimes’*, THE GUARDIAN (Aug. 15, 2024, 6 AM), <https://www.theguardian.com/us-news/article/2024/aug/15/climate-disaster-survivors-letter-big-oil-crimes>.

⁴² Request to Open Investigations & Request for Reparations Submitted Under Article 15 of the Rome Statute of the International Criminal Court (“New Zealand Students for Climate Solutions and U.K. Youth Climate Coalition v. Board of BP”) (2022), https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2022/20221208_19343_points-of-claim.pdf.

⁴³ *Id.*

4. Reparations for rights violations

Impacted individuals or communities may also sue Carbon Majors for violating their rights by causing climate change impacts. Courts across the world, including the European Court of Human Rights⁴⁴ and the Inter-American Court of Human Rights,⁴⁵ have recognized that climate change impacts can infringe upon human and constitutional rights, including the right to life and the right to a healthy environment. When these rights violations do occur, victims may be entitled to reparations, as the Human Rights Committee recognized in *Billy v. Australia*.⁴⁶ However, holding private entities responsible for human rights violations is much more challenging than holding States accountable. Only a few cases have taken this approach, each demonstrating different bases for corporate accountability.

Courts across the world have recognized that climate change impacts can infringe upon human and constitutional rights, including the right to life and the right to a healthy environment.

In response to a complaint by organizations and climate-impacted communities, the Commission on Human Rights of the Philippines found that the Carbon Majors have a responsibility to conduct human rights due diligence and provide remediation.⁴⁷ The Commission reasoned that private corporations are obligated to uphold human rights, citing international standards, guidelines, and principles.⁴⁸ The Commission also observed that the Carbon Majors could be held liable on the basis of Philippines civil law for their efforts to obstruct climate action, including by spreading disinformation.⁴⁹ The Commission's findings, however, are non-binding. While the Commission recommended that policymakers adopt accountability mechanisms for victims of climate change, it did not possess the power to order the government or companies to make victims whole. Nevertheless, the Commission's report bolstered efforts to hold Carbon Majors accountable.

Some legal systems already recognize that private actors have human rights obligations,⁵⁰ opening the door to rights-based loss and damage litigation. In *Rhode Island v. Chevron*, the plaintiff alleges fossil fuel companies are liable for the harms the state faces due to climate change, including substantial sea level rise, more frequent

⁴⁴ Case of Verein Klimasenioren Schweiz and Others v. Switzerland, App. No. 53600/20, <https://hudoc.echr.coe.int/en-g/?i=001-233206>.

⁴⁵ The Environment and Human Rights, Advisory Opinion, 2017, Inter-Am. Ct. H.R. 47 (Nov. 15).

⁴⁶ Human Rights Committee, *Billy and others v. Australia*, UN Doc. CCPR/C/135/D/3624/2019, at 11 (2019) (noting the State party is required to make full reparation for rights violations and therefore "obligated, inter alia, to provide adequate compensation to the authors for the harm that they have suffered..."). While instructive, it is important to note that *Billy v. Australia* is not a loss and damage case, as the petitioners did not explicitly seek remedies for loss and damage already incurred. Instead petitioners sought adaptation and mitigation remedies. The Human Rights Commission ordered compensation on its own accord.

⁴⁷ The Commission on Human Rights of the Philippines, *National Inquiry on Climate Change Report*, at 88 (2022), [20220506_Case-No.-CHR-NI-2016-0001_judgment-1.pdf](https://climatecasechart.com/cases/philippines-national-inquiry-on-climate-change-report-2022/) (climatecasechart.com).

⁴⁸ *Id.* at 89–98.

⁴⁹ *Id.* at 109.

⁵⁰ For example, the South African Constitution establishes rights obligations for corporations. For a discussion of South African jurisprudence on this issue, see Mbuyiseli Madlanga, *The Human Rights Duties of Companies and Other Private Actors in South Africa*, 29 STELLENBOSCH L. REV. 359 (2018).

and severe flooding, extreme precipitation events, drought, and a warmer and more acidic ocean.⁵¹ Among the various tort causes of action, the plaintiff also includes violations of the Rhode Island Environmental Rights Act.⁵² This act, which gives force to environmental rights in the state constitution, authorizes the state government to protect the environment by suing private actors for declaratory or injunctive relief. In this case, and others, the plaintiff connects tort violations with public rights. Public nuisance law, for example, has been interpreted by common law courts as protecting certain public rights predicated on custom or “general consensus.”⁵³ Plaintiffs in Rhode Island and other cases allege that the Carbon Majors interfered with public rights, such as the right to public health, by creating a public nuisance.⁵⁴

Plaintiffs also argue that rights obligations apply to corporations through their duties under tort law. In *Greenpeace Italy v. ENI*, twelve Italian citizens and two NGOs are suing the Italian fossil fuel company ENI and its two majority shareholders, one of which is the Italian Ministry of Economy and Finance, and the other is a development bank controlled by the Ministry.⁵⁵ The plaintiffs allege that the defendants violated the right to life and the right to respect for private and family life by knowingly polluting the atmosphere, concealing the dangers of climate change, and greenwashing the company’s image. They argue that international standards and a civil law duty of care impose human rights obligations on private companies.⁵⁶ They further argue that ENI is effectively an arm of the state because it is directly and indirectly run by the Ministry of Economy and Finance.⁵⁷

ENI illustrates the potential of right-based litigation against the approximately 40 state-owned or operated Carbon Majors.⁵⁸ While the subsidiaries and joint ventures of state-owned entities have been subject to suit for climate change–induced loss and damage,⁵⁹ it remains to be seen whether state-owned entities will be held accountable for rights violations.⁶⁰

⁵¹ See generally, Complaint, Rhode Island v. Shell Oil Products Co., No. PC-2018-4716 (R.I. Super. Ct., 2018), <https://climatecasechart.com/case/rhode-island-v-chevron-corp/>.

⁵² Complaint, Rhode Island v. Shell Oil Products Co., No. PC-2018-4716, 138 (R.I. Super. Ct., 2018), <https://climatecasechart.com/case/rhode-island-v-chevron-corp/>.

⁵³ James L. Huffman, *Public Nuisance: Public Rights, Private Rights and the Common Good* (Law & Economics Center at George Mason University Scalia Law School, Research Paper No. 22-019, 2021), <https://ssrn.com/abstract=3959364>.

⁵⁴ See e.g., *Id.*, at 115–120; Complaint, The People of California ex rel. Rob Bonta v. ExxonMobil et al. No. CGC23609134 (Cal. Super. Ct., Sept. 15, 2023), https://climatecasechart.com/wp-content/uploads/case-documents/2023/20230915_docket-CGC23609134_complaint.pdf; County of Multnomah, *supra* note 26.

⁵⁵ Summons, Greenpeace Italy et al. v. ENI S.p.A. et al., Tribunale Civile di Roma [Civil Court of Rome], May 09, 2023, (It.), <https://climatecasechart.com/non-us-case/greenpeace-italy-et-al-v-eni-spa-the-italian-ministry-of-economy-and-finance-and-cassa-depositi-e-prestiti-spa/>.

⁵⁶ *Id.*, at §26 (drawing on the reasoning in *Milieudefensie et al. v. Royal Dutch Shell plc.*).

⁵⁷ *Id.*, at §30.1.

⁵⁸ Heede, *supra* note 1 (identifying state-owned Carbon Majors); see UN Human Rights Council, Report of the Working Group on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises, at 29-34, UN Doc. A/HRC/32/45 (May 4, 2016) (noting how international law may require States to protect against human rights abuses by state-owned entities).

⁵⁹ Complaint, Municipalities of Puerto Rico v. ExxonMobil Corp. No. 3:22-cv-01550 (D.P.R., 2022), <https://climatecasechart.com/case/municipalities-of-puerto-rico-v-exxon-mobil-corp/>. Among other defendants, the plaintiffs sued Motiva Enterprises, which, at various points in its history, has been partially or fully-owned by Saudi Aramco.

⁶⁰ International law may require States to protect against human rights abuses by state-owned entities. See UN Human Rights

Image of Hurricane Maria approaching Puerto Rico in 2017, whose impacts are the subject of both *Municipalities of Puerto Rico v. Exxon Mobil Corp.* and *Municipality of San Juan v. Exxon Mobil Corp.*
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IV. Evidence in Loss and Damage Litigation

To make their case, plaintiffs will likely need to prove that: 1) the defendant, a Carbon Major, jointly caused or individually aggravated climate change; 2) an environmental trend or event injured them; and 3) climate change caused or contributed to that trend or event.⁶¹ In disinformation and criminal liability cases, plaintiffs may also need to prove that the defendant knew about the dangers of climate change and deliberately sought to mislead the public or consumers about these dangers. If they are seeking compensation, plaintiffs will also need to prove the amount of damage they suffered or are suffering.

Plaintiffs generally provide similar sources and types of evidence to establish these points. The following provides a breakdown of the key evidence raised in loss and damage cases against Carbon Majors. This breakdown is largely based on the evidence that plaintiffs have raised in their initial complaints. As cases proceed, plaintiffs will likely introduce additional evidence in support of their claims.

Council Working Group on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises, Report of the Working Group on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises, at 29–34, UN Doc. A/HRC/32/45 (May 4, 2016).

⁶¹ Michael Burger et al., *The Law and Science of Climate Change Attribution*, 45 COLUM. J. ENV'T L. 57, 205 (2020) (describing this causal chain in the context of tort litigation).



To make their case, plaintiffs will likely need to prove that:

1

the defendant, a Carbon Major, jointly caused or individually aggravated climate change

2

an environmental trend or event injured them

3

climate change caused or contributed to that trend or event

1. The defendant, a Carbon Major, jointly caused or individually aggravated climate change

Reports from the Intergovernmental Panel on Climate Change (IPCC) allow plaintiffs to demonstrate the scientific consensus that humans are causing climate change, particularly through greenhouse gas emissions. These reports aggregate and synthesize climate science, including attribution science, a body of research that assesses the contribution of human-induced climate change to global trends and extreme events.⁶² A large number of cases also cite research tracing emissions from specific Carbon Majors.⁶³ This allows plaintiffs to quantify a specific company's contribution to climate change. Heede's groundbreaking 2014 study⁶⁴ may be the single most common citation in loss and damage cases. Indeed, it may have helped trigger the recent wave of loss and damage cases against Carbon Majors, given the difficulty of proving that a company has meaningfully contributed to climate change without such emissions data. Some plaintiffs also cite source attribution research that specifically quantifies Carbon Major contributions to atmospheric concentrations of CO₂, global mean surface temperatures, sea level rise, and ocean acidification.⁶⁵

⁶² CLIMATE LAW ACCELERATOR & UNION OF CONCERNED SCIENTISTS, THE ROLE OF ATTRIBUTION SCIENCE IN LEGAL ACTION ON LOSS AND DAMAGE (2024).

⁶³ See, e.g., Lliuya, *supra* note 20, at 18; County of Multnomah, *supra* note 26; Complaint, County of Santa Cruz v. Chevron Corp., No. 17CV03242 (Cal. Super. Ct., 2017), <https://climatecasechart.com/case/county-santa-cruz-v-chevron-corp/>; Complaint, Platkin v. ExxonMobil Corp., No. MER-L-001797-22 (N.J. Super. Ct., 2022), <https://climatecasechart.com/case/platkin-v-exxon-mobil-corp/>; Complaint, People v. ExxonMobil Corp., No. CGC23609134 (Cal. Super. Ct., 2023), <https://climatecasechart.com/case/people-v-exxon-mobil-corp/>.

⁶⁴ Heede, *supra* note 1.

⁶⁵ See Summons, Greenpeace Italy et al. v. ENI S.p.A. et al., Tribunale Civile di Roma [Civil Court of Rome], May 09, 2023, (It.), <https://climatecasechart.com/non-us-case/greenpeace-italy-et-al-v-eni-spa-the-italian-ministry-of-economy-and-finance-and-cas-sa-depositi-e-prestiti-spa/> (citing B. Ekwurzel et al., *The Rise in Global Atmospheric CO₂ Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers*, 144 CLIMATIC CHANGE 579 (2017); R. Licker et al., *Attributing Ocean Acidification to Major Carbon Producers*, 14 ENV'T. RES. LETT. 124060 (2019)).

2. An environmental trend or event injured the plaintiff

To establish that a specific trend or event occurred, plaintiffs often cite news articles or scientific reports that discuss aggregate impacts and damages. Plaintiffs may also rely on witness testimony to show that the trend or event indeed injured them. For example, the individual plaintiffs in *Asmania v. Holcim* and *BLOOM v. TotalEnergies* will likely seek to testify about their experiences with extreme weather.⁶⁶ This may look similar to the testimony that was provided to the Philippines Commission on Human Rights. During its proceedings, the Commission heard from a number of survivors of extreme weather events, who described losing their homes and loved ones to powerful typhoons.⁶⁷ The Commission relied on this testimony to support its finding that climate change had adversely impacted Filipinos and their rights.⁶⁸

A number of plaintiffs point to more than one injurious trend or event. For example, the Makah Indian Tribe argues that it has been impacted by sea level rise, extreme precipitation, flooding, heatwaves, droughts, wildfires, ocean acidification, degradation of air and water quality, and the loss of wildlife habitats and species.⁶⁹ At trial, plaintiffs will likely provide evidence that they were injured by each trend or event named in their complaint. This may be easy to do with scientific reports that review environmental changes and weather events in the plaintiff's area.

3. Climate change caused or contributed to the injuring trend or event

Attribution science, though not always cited by plaintiffs, establishes that climate change caused or contributed to a specific environmental event. This is substantial evidence because the variability of the climate and natural phenomena can make it difficult for courts to discern what is and is not caused by climate change. For example, hurricanes were causing damage well before humans started polluting the atmosphere. Therefore, in order to successfully attribute hurricane damage to a corporation, a court will likely expect evidence connecting that hurricane to climate change. Scholars, however, have warned that many climate change cases do not rely on attribution science, risking dismissal for failure to prove causation.⁷⁰ Here, we briefly discuss the role that this evidence is playing in loss and damage litigation.⁷¹

⁶⁶ These cases raise claims based on individual injuries that stem from extreme weather events.

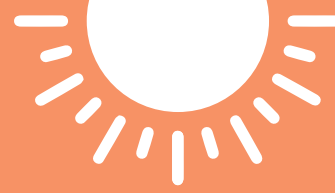
⁶⁷ The Commission on Human Rights of the Philippines, *supra* note 24, at 23–24, 34, 37–38.

⁶⁸ *See e.g., id.*, at 37–38.

⁶⁹ Complaint, Makah Indian Tribe v. ExxonMobil Corp., No. 23-2-25216-1 (Wash. Super. Ct., 2023), https://climatecasechart.com/wp-content/uploads/case-documents/2023/20231220_docket-23-2-25216-1-complaint.pdf.

⁷⁰ RUPERT STUART-SMITH ET AL., ATTRIBUTION SCIENCE AND LITIGATION: FACILITATING EFFECTIVE LEGAL ARGUMENTS AND STRATEGIES TO MANAGE CLIMATE CHANGE DAMAGES 11–14 (2021), <https://durham-repository.worktribe.com/pre-view/1634063/35096.pdf>.

⁷¹ For more detailed information on this issue, see CLIMATE LAW ACCELERATOR & UNION OF CONCERNED SCIENTISTS, THE ROLE OF ATTRIBUTION SCIENCE IN LEGAL ACTION ON LOSS AND DAMAGE (2024).



“Synthesising results from weather observations and model simulations, we conclude 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.”

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*, 13 EARTH SYST. DYNAM. 1689 (2022) (extreme event attribution science study cited in Plaintiff’s Complaint in *Multnomah County v. Exxon Mobil*) (emphasis added).

Extreme event attribution, one form of attribution science, allows plaintiffs to show that climate change caused or played a role in causing a particular environmental event. For example, in *Multnomah County v. ExxonMobil*, the county cites multiple studies that concluded that climate change increased the likelihood and intensity of the 2021 heatwave in the Pacific Northwest.⁷² In *BLOOM v. TotalEnergies*, the eight individual plaintiffs point to attribution studies that connect climate change to the seven different extreme weather events that caused their injuries.⁷³

Some extreme weather events are easier to attribute to climate change than others. Scientists generally find the strongest causal link between climate change and extreme heat events.⁷⁴ On the other hand, they find it more challenging to show that climate change played a crucial role in causing tropical cyclones or flooding from extreme rainfall.⁷⁵ Indeed, scientists sometimes conclude that climate change played little to no role in causing such events.⁷⁶ Moreover, many loss and damage cases allege impacts that are difficult to scientifically attribute to climate change, which may affect the plaintiffs’ ability to prove causation.⁷⁷ Even if plaintiffs provide attribution evidence showing that climate change contributed to a given event, courts may decline to find causation or limit recovery when the contribution was relatively minimal.⁷⁸

⁷² County of Multnomah, *supra* note 26.

⁷³ Press Release, NGOs and Climate Change Victims File Criminal Case Against TotalEnergies Board of Directors and Shareholders (May 2023), https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2024/20240521_68903_press-release-1.pdf.

⁷⁴ Burger et al., *supra* note 50.

⁷⁵ Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, 1569–1585 (2021), https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport_small.pdf.

⁷⁶ See e.g., Joyce Kimutai et al., *Attribution of the Human Influence on Heavy Rainfall Associated with Flooding Events During the 2012, 2016, and 2018 March-April-May Seasons in Kenya*, 38 WEATHER & CLIMATE EXTREMES 100529 (2022); Geert Jan van Oldenborgh et al., *Attribution of Extreme Rainfall From Hurricane Harvey, August 2017*, 12 ENV’T RESCH. LETT. 124009 (2017).

⁷⁷ Rupert Stuart-Smith et al., *supra* note 59, at 12.

⁷⁸ For example, scientists found that climate change exacerbated Hurricane Harvey’s rainfall by 20%. See S-Y Simon Wang et al., *Quantitative Attribution of Climate Effects on Hurricane Harvey’s Extreme Rainfall in Texas*, 13 ENV’T. RES. LETT. (2018). Courts may limit plaintiff recovery to the portion of damages that are attributable to human activities.

Attribution studies can be time and resource-intensive, which limits their availability to plaintiffs. A full study may require hundreds of thousands of dollars, two to three years of research, access to rare supercomputers, and data that spans several decades. As a result, most climate change impacts go unattributed. This situation is prevalent in Global South countries, where there is often less consistent, long-term data.⁷⁹ The same may be true of data collection in countries with high incidences of civil conflict.⁸⁰ This leaves some impacted communities with limited evidence that they are suffering harm from climate change.

Some plaintiffs fill this gap with attribution science that connects climate change to global or regional environmental trends.⁸¹ These cases point to scientific evidence that climate change is causing drought and excessive rainfall, a rise in sea levels and average temperatures, and an increased incidence of infectious disease, among other impacts. The IPCC provides authoritative evidence of these trends in its assessment reports. However, depending on the jurisdiction's evidentiary standards, this evidence may not sufficiently establish that climate change caused a particular drought or sea-level rise in a particular area. This is because a variety of non-climate change factors may contribute to a specific event or local trend, making it difficult to infer causation from aggregate, large-scale attribution research.⁸²

It remains to be seen how courts will handle the question of causation in loss and damage cases. To date, no court has adjudicated the issue on the merits. Attribution science, particularly extreme event attribution, may play a crucial role in proving causation, but it also poses limitations in loss and damage litigation. If plaintiffs successfully rely on attribution science, they may inadvertently set an evidentiary standard that is unobtainable for many communities. This is because scientists have only studied a fraction of the trends, events, and impacts that may be attributable to climate change. In an effort to make attribution science more accessible, a number of organizations have produced or compiled databases of attribution studies.⁸³

⁷⁹ Rachel A. James et al., *Attribution: How Is It Relevant for Loss and Damage Policy and Practice?* in *Loss and Damage from Climate Change: Concepts, Methods and Policy Options* 113 (Reinhard Mechler et al. eds., 2019).

⁸⁰ Kenneth A. Schultz & Justin S. Mankin, *Is Temperature Exogenous? The Impact of Civil Conflict on the Instrumental Climate Record in Sub-Saharan Africa*, 63 AM. J. POL. SCI. 723 (2019), <https://onlinelibrary.wiley.com/doi/full/10.1111/ajps.12425>.

⁸¹ See e.g., Complaint at fn. 45, *Pacific Coast Federation of Fishermen's Associations, Inc. v. Chevron Corp.*, No. CGC-18-571285 (Cal. Super. Ct., 2018), <https://climatecasechart.com/case/pacific-coast-federation-of-fishermens-associations-inc-v-chevron-corp/>; Complaint at fn.41, 58, 107, *Mayor & City Council of Baltimore v. BP p.l.c.*, No. 24-C-18-004219 (Md. Cir. Ct., 2018), <https://climatecasechart.com/case/mayor-city-council-of-baltimore-v-bp-plc/>.

⁸² CLIMATE LAW ACCELERATOR & UNION OF CONCERNED SCIENTISTS, *THE ROLE OF ATTRIBUTION SCIENCE IN LEGAL ACTION ON LOSS AND DAMAGE* (2024).

⁸³ *Mapped: How Climate Change Affects Extreme Weather Around the World*, CARBON BRIEF (Aug. 4, 2022), <https://www.carbon-brief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world/>; World Weather Attribution, *WWA Analyses of Extreme Weather Events*, <https://www.worldweatherattribution.org/analyses/>; Climate Attribution Database, <https://climate-attribution.org/>.

4. The defendant knew about the dangers of climate change and deliberately sought to mislead the public or consumers about these dangers

The evidence establishing this corporate knowledge of climate change is still emerging. However, a great deal of information is already publicly available. In recent decades, researchers have been able to piece together evidence that many Carbon Majors knew about climate change as early as the 1960s, if not earlier.⁸⁴ Many plaintiffs cite a speech that was delivered to the American Petroleum Institute in 1965 as proof that U.S. Carbon Majors understood the dangers of climate change at this time.⁸⁵ At the very least, Carbon Majors were undeniably aware of climate change by the 1990s, when countries negotiated and signed the UN Framework Convention on Climate Change.⁸⁶ Some research specifically quantifies recent Carbon Major emissions,⁸⁷ providing evidence of their acknowledged contribution to climate change.

In recent decades, researchers have been able to piece together evidence that many Carbon Majors knew about climate change as early as the 1960s, if not earlier.

Internal documents from certain Carbon Majors and their lobbying groups show that many companies engaged in an effort to spread disinformation about climate change.⁸⁸ Plaintiffs also cite the public-facing evidence of this disinformation campaign, such as misleading advertisements, publications, and interviews that are attributable to the Global Climate Coalition (GCC), a lobbying group funded by the fossil fuel industry.⁸⁹ For example, the plaintiff in *County of Multnomah v. ExxonMobil Corp* alleges that in 1998, a GCC-funded scientist distributed a “petition” signed by 17,000 fake scientists that claimed that there was no scientific evidence of climate change.⁹⁰ As the disinformation cases proceed toward trial, they may reveal additional evidence of corporate efforts to deceive the public.⁹¹

⁸⁴ Benjamin Franta, *Early Oil Industry Knowledge of CO₂ and Global Warming*, 8 NATURE CLIMATE CHANGE 1024 (2018).

⁸⁵ See e.g., *County of Multnomah*, *supra* note 26, at 6 (citing Franta, *supra* note 77).

⁸⁶ UN Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107.

⁸⁷ See The Carbon Majors Database, *CDP Carbon Majors Report* (2017), [Carbon-Majors-Report-2017.pdf \(cdp.net\)](#) (tracing emissions between 1988, when the IPCC was first formed, and 2015).

⁸⁸ Mulvey & Shulman, *supra* note 2.

⁸⁹ Center for Climate Integrity, *Deception Documents*, <https://climateintegrity.org/lie-brary/they-lied>.

⁹⁰ *County of Multnomah*, *supra* note 26, at 138–39.

⁹¹ Dharna Noor, *Why 2024 Will Be a Crucial Year for Climate Litigation*, THE GUARDIAN (Jan. 22, 2024, 9 AM), https://www.theguardian.com/us-news/2024/jan/22/climate-change-cases-2024-lawsuits?CMP=Share_iOSApp_Other.



The Plaintiffs in *Platkin v. Exxon Mobil Corp.* allege that Hurricane Sandy destroyed more than 700,000 buildings and caused \$29.4 billion in damages.
© Tim Larsen, Governor's Office, Reuters

5. Evidence of specific damages

Some plaintiffs cite local government reports to demonstrate the cost of damages they have suffered from climate change impacts. Others cite independent reports and scholarly research that document the costs associated with certain weather events.⁹² However, most plaintiffs do not provide this type of evidence in their complaints.

While some cases have reached the evidentiary stage of litigation, these proceedings are not currently public or resolved.⁹³ Through the process of discovery, plaintiffs may have uncovered additional information about the defendant's conduct. Similarly, some plaintiffs may have gathered evidence that they did not submit in their complaint. As these cases proceed, we will have a more complete sense of the evidence plaintiffs are relying on.

⁹² See e.g., Complaint at ¶ 218, *Municipalities of Puerto Rico v. ExxonMobil Corp.*, No. 3:22-cv-01550 62 (2022), https://climate-casechart.com/wp-content/uploads/case-documents/2022/20221122_docket-322-cv-01550_complaint.pdf (citing a report that Hurricane Irma directly killed 52 people, indirectly killed 82 people, and inflicted \$77.16 billion in damages); Lliuya, *supra* note 20, at 20 (citing an expert appraisal of the cost of draining the glacial lake that threatens the plaintiff's land).

⁹³ See e.g., L. Delta Merner, *Court Case in Hawai'i Against Fossil Fuel Companies Passes Major Milestone*, UNION OF CONCERNED SCIENTISTS BLOG (Mar. 2, 2022), <https://blog.ucsusa.org/delta-merner/court-case-in-hawaii-against-fossil-fuel-companies-passes-major-milestone>; Christopher Bonasia, *Officials Visit Melting Glaciers in Peru in Climate Case Against German Utility RWE*, THE ENERGY MIX (Jun. 1, 2022), <https://www.theenergymix.com/officials-visit-melting-glaciers-in-peru-in-climate-case-against-german-utility-rwe/>.



Saibai Island in the Torres Strait Islands that is the subject of the *Daniel Billy v. Australia* case.
© Brad Marsellos

V. Loss and Damage Remedies

Most loss and damage cases against Carbon Majors ask for monetary compensation. They allege economic and non-economic injuries that range from infrastructure damage to declines in mental health.⁹⁴ While some plaintiffs specify the exact amount of compensation they are seeking,⁹⁵ most leave this determination for a later stage of the proceedings. This decision may allow plaintiffs to gather further evidence on the exact level of compensation they are entitled to while they litigate the case. It can be difficult to assess the full extent of harm caused by climate change, much less the level of compensation that those harms demand. In particular, non-economic losses, such as cultural erasure, will be difficult to quantify.

It can be difficult to assess the full extent of harm caused by climate change, much less the level of compensation that those harms demand. In particular, non-economic losses, such as cultural erasure, will be difficult to quantify.

⁹⁴ See e.g., Complaint, *Minnesota v. American Petroleum Institute*, No. 0:20-cv-01636 62 (D. Minn., 2020), <https://climatecasechart.com/case/state-v-american-petroleum-institute/>.

⁹⁵ County of Multnomah, *supra* note 26 (demanding compensatory damages of \$50 million for past harms; an order establishing an abatement fund of at least \$50 billion to cover the costs of adaptation; and compensatory damages of at least \$1.5 billion for harms that will occur before the county is able to effectively reduce or prevent adverse climate change impacts).

Impact attribution studies may help plaintiffs attribute specific damages to climate change. For example, scientists have found that 37% of heat-related deaths are attributable to anthropogenic climate change.⁹⁶ However, this underscores another challenge to quantifying damages: many climate change harms occur at a community level rather than an individual level. As a result, it can be challenging to show that a particular injury—such as a heat-related death—is attributable to climate change.

Compensation may be limited by non-climate change factors that contributed to the plaintiff’s injuries. As noted above, some weather events and environmental trends are only partly attributable to climate change. Defendants will likely only be found liable for damages caused by climate change, which could be only a portion of the plaintiff’s overall injuries. For example, a plaintiff may only be able to recover 20% of the damages they suffered from hurricane flooding if they rely on evidence showing that climate change made the hurricane’s rainfall 20% more intense.⁹⁷ However, plaintiffs may be able to fully recover if they can show that climate change is fully, rather than partially, responsible for an injurious event. Some event attribution studies, particularly those focusing on extreme heat, find that climate change made an event substantially more likely or intense. Additionally, as with claims for compensation, plaintiff recovery could be limited by contributory causes, including the plaintiff’s contributory or comparative negligence.⁹⁸

Many climate change harms occur at a community level rather than an individual level. As a result, it can be challenging to show that a particular injury—such as a heat-related death—is attributable to climate change.

Many plaintiffs also request remedies designed to prevent ongoing and future loss and damage, either through adaptation or mitigation. This approach is based on the understanding that the plaintiffs will continue to suffer losses from climate change impacts well into the future. In some cases, plaintiffs broadly ask for assistance with adapting to climate change impacts, while others ask the court to establish an “abatement fund,” which would cover the costs of adapting to climate change.⁹⁹ In some jurisdictions, plaintiffs may be precluded from bringing a second lawsuit for those future damages if they could have included these damages in their initial case.¹⁰⁰ Additionally, some plaintiffs also ask the court to order the defendant(s) to reduce or phase out their emissions.¹⁰¹

⁹⁶ A. M. Vicedo-Cabrera et al., *The Burden of Heat-related Mortality Attributable to Recent Human-induced Climate Change*, 11 NAURE. CLIMATE CHANGE 492 (2021).

⁹⁷ Wang et al., *supra* note 78.

⁹⁸ JUSTIA, *Comparative & Contributory Negligence in Personal Injury Lawsuits*, <https://www.justia.com/injury/negligence-theory/comparative-contributory-negligence/>.

⁹⁹ See e.g., Complaint, City of Oakland v. BP p.l.c., No. 22-16810, 22-16812, (9th Cir., 2017), <https://climatecasechart.com/case/people-state-california-v-bp-plc-oakland/>; Complaint, King County v. BP p.l.c., No. 18-2-11859-0, (Wash. Super. Ct., 2017), <https://climatecasechart.com/case/king-county-v-bp-plc/>; County of Multnomah, *supra* note 26; Complaint, Makah Indian Tribe v. ExxonMobil Corp., No. 23-2-25216-1 (Wash. Super. Ct., 2023), <https://climatecasechart.com/case/makah-indian-tribe-v-exxon-mobil-corp/>; Complaint, Shoalwater Bay Indian Tribe v. ExxonMobil Corp., No. 23-2-25215-2 (Wash. Super. Ct., 2023), <https://climatecasechart.com/case/shoalwater-bay-indian-tribe-v-exxon-mobil-corp/>.

¹⁰⁰ See e.g., the South African “once and for all” rule. Olesitse NO v Minister of Police, 470/2021 [2022] ZASCA 90 (S. Afr. Jun. 15, 2022).

¹⁰¹ See e.g., Asmania, *supra* note 27.

Plaintiffs in loss and damage cases have also sought punitive remedies, such as punitive damages or civil fines.¹⁰² For example, in *NZ Students for Climate Solutions v. Board of BP*, the plaintiffs leverage international environmental law by requesting that BP pay reparations to the victims of climate change by making payments to the UN mechanisms to address loss and damage, pursuant to Article 8 of the Paris Agreement.¹⁰³ In *BLOOM v. TotalEnergies*, the plaintiffs may even request jail time for the directors of the company. While not technically a punishment, many cases also seek disgorgement of the profits that Carbon Majors obtained through their wrongful conduct.¹⁰⁴ In the case of a fossil fuel company, this may amount to nearly all of their profits over the past several decades.

Plaintiffs also ask for practical or symbolic reparations. In *Falys v. TotalEnergies*, a Belgian farmer seeks recognition of the damages he has suffered as a result of climate change, in addition to compensation and injunctive relief.¹⁰⁵ In *Connecticut v. ExxonMobil*, the state seeks an injunction ordering ExxonMobil to “disclose all research and studies in its possession . . . that relates to the issue of climate change” and to “fund a corrective education campaign to remedy the harm inflicted by decades of disinformation.”¹⁰⁶ Minnesota makes similar requests in its complaint.¹⁰⁷

Finally, in some cases, plaintiffs seek remedies for injuries sustained by third parties. State and local governments in the U.S. have brought lawsuits based on their own injuries, such as damage to government infrastructure, as well as injuries suffered by their citizens. The common law *parens patriae doctrine* allows governments to represent the interests of their citizens, particularly when the government is best positioned to advocate for collective interests.¹⁰⁸ In *Municipalities of Puerto Rico v. ExxonMobil*, the plaintiffs have asked for damages for wrongful deaths caused by hurricanes in 2017.¹⁰⁹ These damages would presumably go to the families who lost their loved ones.

¹⁰² See e.g., Complaint, Bucks County v. BP p.l.c., No. 2024-01836-0000 (Pa. C.P., 2024), <https://climatecasechart.com/case/bucks-county-v-bp-plc/>; Complaint, People v. ExxonMobil Corp., No. CGC23609134, (Cal. Super. Ct., 2023), <https://climatecasechart.com/case/people-v-exxon-mobil-corp/>; Complaint, County of Maui v. Sunoco LP, No. 2CCV-20-0000283 (Haw. Cir. Ct., 2020), <https://climatecasechart.com/case/county-of-maui-v-sunoco-lp/>.

¹⁰³ New Zealand Students for Climate Solutions, *supra* note 42, at 69.

¹⁰⁴ See e.g., Complaint, City of Chicago v. BP p.l.c. 2024, No. 2024CH01024 (Ill. Cir. Ct., 2024), <https://climatecasechart.com/case/city-of-chicago-v-bp-plc/>; Complaint, Bucks County v. BP p.l.c., No. 2024-01836-0000 (Pa. C.P., 2024), <https://climatecasechart.com/case/bucks-county-v-bp-plc/>; Complaint, City of Imperial Beach v. Chevron Corp. et al, No. 3:17-cv-04934-VC (U.S., 2017), https://climatecasechart.com/wp-content/uploads/case-documents/2020/20200701_docket-417-cv-04934_notice-1.pdf; Complaint, County of San Mateo v. Chevron Corp., No. CIV1702586 (Cal. Super. Ct., 2017), <https://climatecasechart.com/case/county-san-mateo-v-chevron-corp/>.

¹⁰⁵ The Farmer Case, *supra* note 27.

¹⁰⁶ Complaint, Connecticut v. ExxonMobil Corp., No. 3:20-cv-01555 (D. Conn., 2020), <https://climatecasechart.com/case/state-v-exxon-mobil-corp/>.

¹⁰⁷ Minnesota v. American Petroleum Institute, *supra* note 94.

¹⁰⁸ Legal Information Institute, *parens patriae*, https://www.law.cornell.edu/wex/parens_patriae.

¹⁰⁹ Complaint, Municipalities of Puerto Rico v. ExxonMobil Corp., No. 3:22-cv-01550 (D.P.R., 2022), https://climatecasechart.com/wp-content/uploads/case-documents/2022/20221122_docket-322-cv-01550_complaint.pdf.



VI. Jurisdictions for Loss and Damage Litigation

Jurisdictional differences play a significant role in shaping the issues discussed in the foregoing sections. Plaintiffs choose their case theories, claims, defendants, evidence, and requested remedies according to the precedent and law in their chosen forum. A loss and damage claim might easily fit the elements of nuisance in one jurisdiction, whereas negligence might be more appropriate in another jurisdiction. Additionally, certain jurisdictions may be more favorable for loss and damage litigation, leading to strategic forum selection. For example, most loss and damage plaintiffs in the United States have tailored their claims to state law in order to avoid falling under federal court jurisdiction.¹¹⁰ Here, we provide a brief discussion of factors related to forum selection.

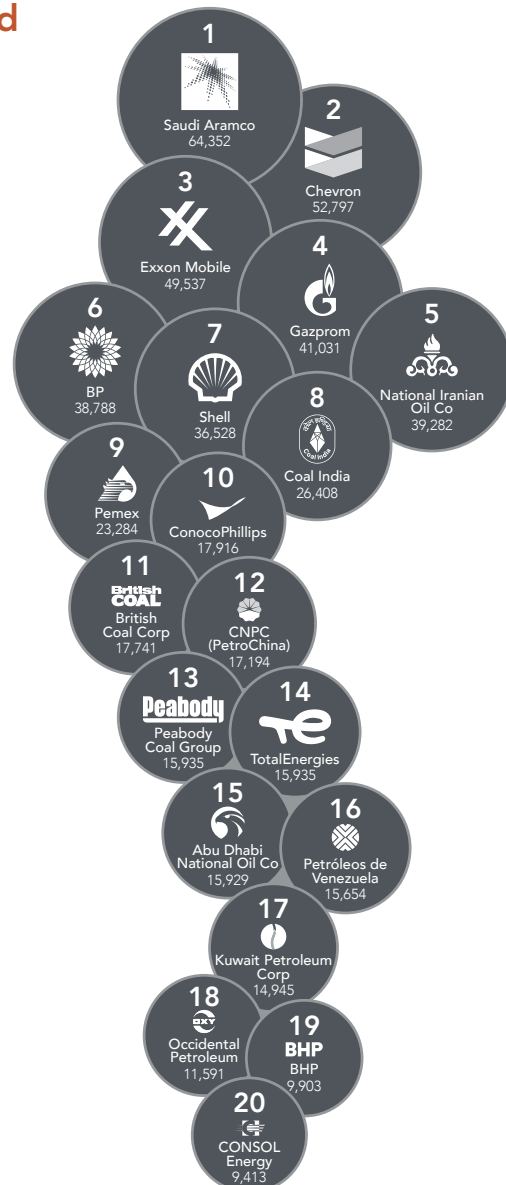
As noted above, some courts do not have or will decline to exercise jurisdiction over a Carbon Major. As a general rule, companies can be sued where they are headquartered, incorporated, or have business operations. However, most multinational corporations attempt to shield themselves from liability in other countries by establishing independent or semi-independent subsidiaries in those countries. This helps multinational parent companies to evade responsibility for the actions of their subsidiaries and the jurisdiction of foreign courts. For example, in the United States, courts will generally not have jurisdiction over foreign parent companies unless that company is effectively operating in the United States through its U.S. subsidiary.¹¹¹

Yet courts may still exercise jurisdiction over foreign companies under a number of circumstances. In some instances, courts will exercise jurisdiction over a parent company through their jurisdiction over

¹¹⁰ Karen C. Sokol, *Seeking (Some) Climate Justice in State Tort Law*, 95 WASH. L. REV. 1383 (2020).

¹¹¹ Garrett J. Fitzpatrick & Stephanie N. Brie, *Personal Jurisdiction over Parent Corporations*, 38(4) BRIEF 38 (2009).

Top 20 State- and Investor-owned Companies by Emissions (1854-2022)



TOP 20:
30.2%
of GLOBAL SHARE
1854-2022

50% of these
companies are
state-owned

the subsidiary, sometimes through a process known as attachment.¹¹² Many countries also recognize jurisdiction at the site of the plaintiff's injury (i.e., the place of damage).¹¹³ This opens up possibilities for strategic forum selection in the context of climate change, given that climate change has caused damage worldwide. While this jurisdictional rule was not designed with climate change in mind, courts have applied the rule to disputes that almost exclusively relate to another territory.¹¹⁴ Additionally, some countries apply even more lenient jurisdictional rules.¹¹⁵

There may, however, be practical challenges to suing a Carbon Major outside of its home country. Even when courts exercise jurisdiction over foreign companies, they may not be able to compel said companies to comply with

¹¹² See e.g., Mitchell Nold De Beer, *South Africa in CIVIL LIABILITY FOR HUMAN RIGHTS VIOLATIONS: A HANDBOOK FOR PRACTITIONERS* 520 (Ekaterina Aristova & Catherine O'Regan eds., 2022), https://ora.ox.ac.uk/objects/uuid:1f7f5596-aed4-431c-a757-886f6b56e0d3/download_file?file_format=pdf&hyrax_fileset_id=s2f75r9356&safe_filename=CivilLiabilityHumanRightsViolations-full-Oct2022.pdf&type_of_work=Book.

¹¹³ Linda J. Silberman, *Goodyear and Nicastro: Observations from a Transnational and Comparative Perspective*, 63 S.C. L. REV. 593 (2012).

¹¹⁴ See e.g., *FS Cairo (Nile Plaza) LLC v. Lady Brownlie* [2021] UKSC 45 (U.K.) (exercising jurisdiction over a dispute regarding an accident in Egypt because the plaintiff suffered consequential losses in the U.K. after returning).

¹¹⁵ For example, French courts recognize jurisdiction over any dispute involving French citizens. See Silberman, *supra* note 113, at 607 n. 94.

court orders, such as subpoenas or a damages award. Courts may use a foreign company's domestic assets—such as its subsidiaries—to force compliance; however, these assets may not cover the full cost of the plaintiff's damages. Plaintiffs could thus be forced to bring a subsequent enforcement action in the Carbon Major's home country, which is not guaranteed to succeed. This challenge is illustrated by Chevron's successful evasion of a damages judgment issued by the Ecuadorian courts.¹¹⁶ Additionally, some legal systems impose doctrinal barriers on transnational lawsuits, such as the *forum non conveniens* doctrine, which allows courts to dismiss cases that would be more conveniently litigated in a different jurisdiction.¹¹⁷

All loss and damage cases have been filed in countries where at least one of the defendant Carbon Majors is headquartered, namely the United States, Germany, Switzerland, and Italy. In some cases, plaintiffs have also added foreign Carbon Majors or their domestic subsidiaries as co-defendants.¹¹⁸ It is likely that plaintiffs will file suits in other countries as loss and damage continues to mount. In an effort to avoid being undermined by adverse precedent, plaintiffs may avoid bringing cases in jurisdictions where there is already active litigation against Carbon Majors.

Lliuya and *Asmania* may foreshadow a coming wave of transnational loss and damage litigation, following in the footsteps of transnational human rights litigation. Foreigners can bring lawsuits in most democratic legal systems, though they may face practical and legal barriers. This approach will be particularly important for communities in the Global South, which are experiencing the brunt of climate change despite having contributed the least GHG pollution. If the UN Loss and Damage Fund fails to effectively cover the mounting costs of climate change in the Global South, communities may turn to litigation as an alternative—albeit similarly imperfect—avenue for recovery.

In the absence of direct precedent, litigants must look to analogous precedent. In the United States, a robust body of toxic tort and environmental pollution precedent provides a basis for loss and damage litigation.

It is difficult to say which jurisdictions might be most favorable to loss and damage litigation. Only U.S. federal courts have ruled on the issue, sending a clear message that the jurisdiction is hostile to loss and damage claims. In the absence of direct precedent, litigants must look to analogous precedent. In the United States, a robust body of toxic tort and environmental pollution precedent provides a basis for loss and damage

¹¹⁶ Larry Neumeister, *US Court Rules for Chevron in Ecuador Rainforest Damage Case*, AP (Aug. 8, 2016, 2:59 PM), <https://apnews.com/general-news-f1a99311c5f648f6939aab3208a5d550>.

¹¹⁷ Ronald A. Brand & Scott R. Jablonski, *Similarities and Differences in Common Law Forum Non Conveniens Doctrine in FORUM NON CONVENIENS: HISTORY, GLOBAL PRACTICE, AND FUTURE UNDER THE HAGUE CONVENTION ON CHOICE OF COURT AGREEMENTS 101* (2007) (comparing application of the doctrine in the U.S., U.K., Canada, and Australia).

¹¹⁸ See e.g., Complaint, *City of Oakland v. BP p.l.c. No. 3:17-cv-06011* (N.D. Cal., 2018) <https://climatecasechart.com/case/people-state-california-v-bp-plc-oakland/> (suing BP and Royal Dutch Shell, both of which are foreign defendants); Complaint, *State of Delaware ex rel. Kathleen Jennings v. BP America Inc., et al.*, No. N20C-09-097 MMJ CCLD (Del. Super. Ct., 2020), https://climatecasechart.com/wp-content/uploads/case-documents/2020/20200910_docket-N20C-09-097_complaint.pdf (suing the U.S. subsidiaries of BP and Total in addition to the parent companies).



Image of 2019 wildfires in Maui County (known as "the year of fire") which form part of the *County of Maui v. Sunoco* case. © Courtesy of the County of Maui

litigation.¹¹⁹ In other countries, successful climate change cases could provide a basis for climate liability. For example, in *Notre Affaire à Tous v. France*, the Administrative Court of Paris recognized the causal link between emissions and damage from climate change and awarded the plaintiffs a single euro for moral damages.¹²⁰ The plaintiffs had also requested a single euro in compensation, but the court declined this on the basis that the government could still repair the harm to the environment.¹²¹ The court's reasoning provides a clear basis for compensation in future cases where the loss and damage cannot be repaired.

When selecting a forum, litigants may also consider procedural and statutory law. For example, civil law jurisdictions, such as France and Germany, generally have stricter evidentiary standards than common law countries.¹²² Evidentiary standards may play a key role in loss and damage litigation, given the challenges of proving causation in the context of climate change. Statutes of limitations may also impact forum selection, as some legal systems only allow plaintiffs to bring a claim within a couple of years of the damage materializing.

Plaintiffs may also take political considerations into account when selecting a forum. For example, litigation against a Carbon Major owned by a developing country may not fit well with the plaintiff's narrative around climate justice. Some courts also have a reputation for being more conservative, which may cause plaintiffs to look to other jurisdictions. The following section discusses some of the political challenges that loss and damage litigation may face.

¹¹⁹ Albert Lin & Michael Burger, *State Public Nuisance Claims and Climate Change Adaptation*, 35 PACE ENVTL. L. REV 49 (2018).

¹²⁰ *Notre Affaire à Tous and Others v. France*, Tribunal Administratif de Paris [Paris Administrative Court], Feb. 03, 2021, N°1904967, 1904968, 1904972, 1904976/4-1 (Fr.), https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2021/20210203_NA_decision-2.pdf.

¹²¹ *Id.*

¹²² Kevin M. Clermont & Emily Sherwin, *A Comparative View of Standards of Proof*, 50 AM. J. COMP. L. 243 (2002).



VII. Challenges for Loss and Damage Litigation

Accountability for climate change is one of the most politically charged and contested issues in climate law. High emitter countries, particularly the United States, have long resisted any suggestion of liability for climate change.¹²³ Similarly, the Carbon Majors have fought hard to dismiss loss and damage cases. Courts are not immune to politics, so plaintiffs will need to contend with the political dimensions of loss and damage litigation.

Courts are likely to be concerned about effectively regulating the energy industry by holding companies liable for climate change. Civil liability is often conceived of as a form of *ex post*, or after-the-fact, regulation.¹²⁴ It serves as a way to prevent and discourage unwanted behaviors by correcting the behavior after it has happened. On their face, most loss and damage cases do not explicitly ask for an injunction against further GHG emissions. Yet, a finding of liability for past GHG emissions would almost inevitably have the effect of forcing companies to consider reducing or eliminating their current emissions, lest they subject themselves to further liability. Courts may be reluctant to issue sweeping rulings that can be perceived as regulating entire industries, particularly those that are deeply embedded in the global economy, like the fossil fuel industry.

Accountability for climate change is one of the most politically charged and contested issues in climate law.

¹²³ Andrea Nishi, *Unpacking the Liability Argument Against Loss and Damage Funding*, CLIMATE LAW: A SABIN CENTER BLOG (Nov. 7, 2022), <https://blogs.law.columbia.edu/climatechange/2022/11/07/unpacking-the-liability-argument-against-loss-and-damage-funding/>.

¹²⁴ Olha O. Cherednychenko, *Financial Regulation and Civil Liability in European Law: Towards a More Coordinated Approach?* in FINANCIAL REGULATION AND CIVIL LIABILITY IN EUROPEAN LAW 2 (Olha O. Cherednychenko & Mads Andenas eds., 2020), <https://china.elgaronline.com/edcollbook/edcoll/9781789908107/9781789908107.xml>.

Courts are also likely to be concerned about opening the litigation ‘floodgates.’ Climate change has already injured a great many people, and it will injure far more in the decades to come. Courts understand that finding a company liable for climate change could—through *res judicata* and persuasive precedent—make that company liable to much of the world. It would be nearly impossible for a court to limit a company’s climate liability to a single injured party or group, given the scale of climate change devastation. Additionally, finding an emitter liable will raise a question of liability for other emitters. Courts will be reluctant to set a precedent that could lead to liability for smaller emitters or companies that finance or contract with major emitters. In short, courts may fear that ruling against Carbon Majors will trigger a flood of similar lawsuits.

Nevertheless, plaintiffs can structure their cases to address these concerns. Some plaintiffs, such as those in *Lliuya or Boulder County*, specifically state in their complaint that they are not seeking an injunction against current or future GHG emissions.¹²⁵ Other cases limit the scope of liability by focusing on activities that went beyond simply emitting GHGs. For example, the disinformation cases would only regulate future disinformation about climate change rather than all fossil fuel production and sales. Similarly, these cases would only set a precedent for other companies that engaged in deception.

Plaintiffs may also assuage these political concerns in other ways. Scholars have critiqued the “shaky” reasoning behind the floodgates concern, arguing that workload considerations should not factor into the interpretation of substantive law.¹²⁶ Many impacted individuals or communities may not pursue litigation or may not be able to prove that they were impacted by climate change. Moreover, if such a flood of litigation does occur, this would only be evidence of a gross injustice that needs to be corrected. Companies were bankrupted by asbestos liability,¹²⁷ but this was necessary to remedy the harm that had occurred. Indeed, in recent decades, courts have developed and approved class action settlements that compensate large classes of plaintiffs, including plaintiffs who have yet to develop an injury.¹²⁸

¹²⁵ Lliuya, *supra* note 20, at 24; Complaint at 541-542, Bd. of Cnty. Comm’rs of Boulder Cnty. v. Suncor Energy (U.S.A.) Inc., 25 F.4th 1238 (10th Cir., 2022), <https://climatecasechart.com/case/board-of-county-commissioners-of-boulder-county-v-suncor-energy-usa-inc/>.

¹²⁶ Marin K. Levy, *Judging the Flood of Litigation*, 80 U. CHIC. L. REV. 1007 (2013).

¹²⁷ *A Brief History of Asbestos Litigation*, MESOTHELIOMA + ASBESTOS AWARENESS CENTER (Jul. 27, 2016), <https://www.maacenter.org/blog/a-brief-history-of-asbestos-litigation/>.

¹²⁸ See e.g., the National Football League settlement regarding player concussions: NFL Concussion Settlement, <https://www.nflconcussionsettlement.com/internal/Home.aspx>.



VIII. Conclusion

Loss and damage litigation is emerging as a potential means to hold Carbon Majors accountable for climate change. These cases could compensate impacted communities for significant losses, assist with adaptation to climate impacts, and encourage companies to reduce greenhouse gas (GHG) emissions. However, plaintiffs and litigators will face a number of strategic decisions that must be carefully considered, given the many potential challenges and implications of this litigation.

Given that no merits decisions have been made in this subfield of climate litigation, one cannot currently discern a “winning strategy” in any jurisdiction. Moreover, any analysis of a field still in its infancy will inherently involve limitations. For instance, in assessing the evidence presented by plaintiffs, we are constrained by the fact that most cases remain embroiled in jurisdictional disputes, and plaintiffs will likely introduce additional evidence as they advance to the discovery and merits stages. Nevertheless, a review of these largely pending cases provides insight into the various strategic decisions confronting plaintiffs in this area. This report highlights some of these decisions in an effort to aid relevant decision-makers and impacted communities that are considering legal action against Carbon Majors. Critical choices include whom to sue (defendants), the theory of liability, how to substantiate the case (evidence), what relief to seek (remedies), and where to litigate (jurisdiction).

Jurisdictional differences significantly influence how plaintiffs approach loss and damage claims, affecting their choice of legal theories, defendants, and remedies based on the laws and precedents of their chosen forum. Strategic forum selection will likely remain critical as plaintiffs contend not only with these implications but also with evidentiary standards, statutes of limitations, political considerations, and enforcement tools. While some jurisdictions may be less accommodating to loss and damage claims, successful precedents in various regions may inspire further litigation efforts, particularly from communities in the Global South facing the most severe climate impacts.

As detailed above, litigators in the loss and damage field to date have primarily relied on theories of civil liability predicated on GHG emissions and disinformation regarding the risks of fossil fuels. However, less-utilized theories—such as civil liability based solely on GHG emissions, criminal liability, and reparations

Litigators in the loss and damage field have primarily relied on theories of civil liability predicated on GHG emissions and disinformation regarding the risks of fossil fuels. However, less-utilized theories—such as civil liability based solely on GHG emissions, criminal liability, and reparations for rights violations—warrant further exploration.

for rights violations—warrant further exploration as the field remains nascent. A review of the complaints in these cases indicates that plaintiffs typically present similar types of evidence, ranging from IPCC reports to Heede’s quantitative analysis of Carbon Majors’ emissions, to demonstrate that these companies have jointly or individually exacerbated climate change and that climate change has caused or contributed to the injurious trends or events in question.

Finally, regarding remedies, most loss and damage cases against Carbon Majors primarily seek monetary compensation for a range of economic and non-economic injuries, including infrastructure damage and mental health declines, though specific amounts are typically left for later stages in the dispute. Plaintiffs can expect to encounter challenges in quantifying damages, particularly for non-economic losses and injuries at the community level, and may only recover a portion of their losses if climate change is shown to be only partially responsible. In addition to monetary claims, plaintiffs also seek preventive measures, punitive damages, and practical or symbolic reparations, at times aiming to represent the collective interests of their communities in lawsuits.

While these emerging cases may pave the way for more transnational lawsuits, they also signal the challenges that lie ahead. Accountability for climate change remains a contentious issue in climate law, especially as high-emitting countries and major fossil fuel companies resist liability claims. Courts may remain hesitant to issue broad rulings that could regulate entire industries or open the floodgates to widespread litigation. Even so, these hurdles have not yet proven insurmountable, and plaintiffs may be able to strategically frame their cases to alleviate these concerns by, *inter alia*, focusing on specific actions or misdeeds rather than broad emissions injunctions.

Although this report primarily targets a legal audience, we hope it also serves as a resource for impacted communities regarding the potential of loss and damage litigation. Empowered by an understanding of the possibilities, impacted communities can—and should—take a leading role in pursuing loss and damage claims.

