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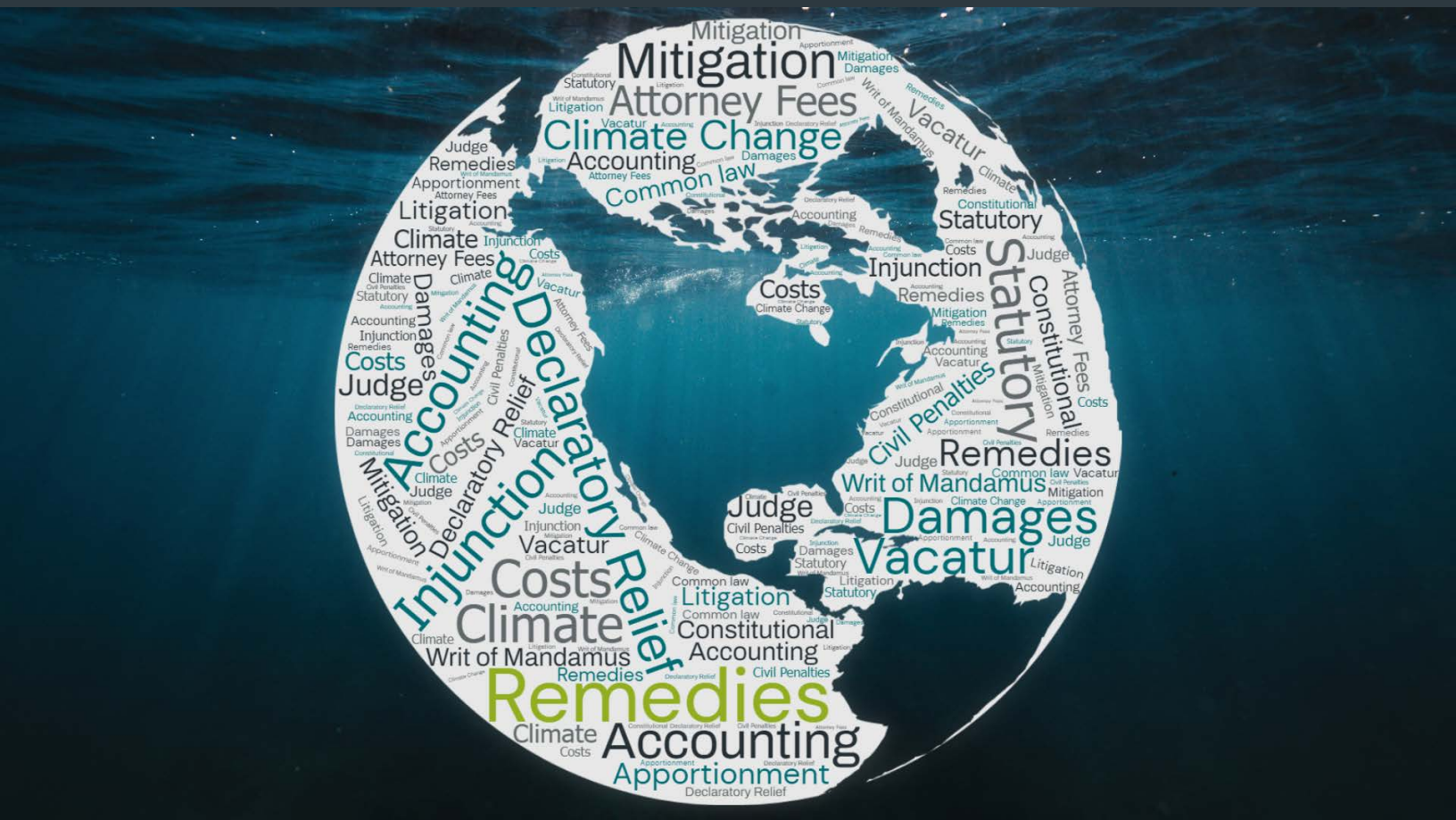
Judicial Remedies for Climate Disruption: A Preliminary Analysis



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The Environmental Law Institute makes law work for people, places, and the planet. Since 1969, ELI has played a pivotal role in shaping the fields of environmental law, policy, and management, domestically and abroad. Today, in our sixth decade, we are an internationally recognized, non-partisan publishing, research, and education center working to strengthen environmental protection by improving law and governance worldwide.

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by John C. Dernbach* and Patrick Parenteau**

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I. Introduction

Achieving an effective remedy is the ultimate objective of nearly all litigation, and that is especially true for climate change litigation. Climate litigation is an elastic term meaning different things to different people. In this paper, we focus on climate change cases that seek science-based remedies specifically related to climate mitigation (i.e., actions to reduce greenhouse gas (GHG) emissions or draw down atmospheric carbon), and climate-change adaptation (i.e., actions to reduce the negative impacts of climate disruption on human and natural communities). In doing so, we focus on the forms and terms of relief sought by plaintiffs or petitioners.

As a result, we exclude much. For example, this treatment is not meant to be a deep dive into the thorny justiciability issues, namely separation of powers, standing, and political question that arise in climate litigation—issues that are typically raised by defendants to get these cases dismissed. For more information on those topics, see the Overview of Climate Litigation and Procedural Techniques modules of the curriculum. Still, as will be seen, the ability of these cases to survive justiciability and other procedural objections depends to a great degree on the remedies being sought. We also recognize that there are many cases challenging government regulations mandating mitigation or adaptation measures, but those are beyond the scope of this inquiry.

This paper will review remedies most commonly sought in climate change litigation, and a few that are less commonly sought. They are: (1) injunctive relief, (2) writ of mandamus, (3) declaratory relief, (4) remand, (5) vacatur, (6) damages, (7) civil penalties, (8) accounting, and (9) award of costs and attorney fees. The straightforward nature of this presentation understates, to some degree, the complexity of climate change litigation, with a wide variety of plaintiffs and defendants, many different causes of action, and different forms of relief. While this paper focuses on remedies, it has proven difficult to completely separate remedies from causes of action, particularly when plaintiffs allege multiple causes of action and request multiple forms of relief. So, our discussion of the remedies issues necessarily tends to involve some discussion of the claims being made. Our focus is on U.S. cases, both federal and state, with some references to key decisions rendered in other countries for comparative purposes. Climate cases are used throughout, with only a few exceptions where a particular point seemed best illustrated with another type of case.

Climate change presents both a challenge and an opportunity for courts. According to the world's leading scientists, climate change poses an existential threat to human civilization itself that demands an unprecedented response from all sectors of the global society. Thus far, that response has not been forthcoming and climate activists are increasingly turning to the courts seeking redress.

Yet, under principles of separation of powers, courts have a limited role in our system of government, deciding what the law means and applying law to facts in the specific cases before them. We do not see these competing interests as irreconcilable. The wide variety of remedies discussed in this paper—some granted by courts, and some not granted—provide a way of understanding how courts can fulfill their constitutional functions of adjudicating controversies, declaring rights and responsibilities, and enforcing the rule of law, while at the same time respecting

the functions and responsibilities of the coordinate branches of government. This involves a delicate balance, to be sure, but one that the courts have the tools to manage.

II. Injunctive Relief

Injunctive relief is an equitable remedy that cuts across constitutional, statutory, and common-law claims. An injunction, of course, is a court order to the defendant to do or refrain from doing something; injunctions vary widely in scope, complexity, duration, and need for judicial supervision and enforcement.[1] Broadly speaking, injunctions may be divided into mandatory injunctions, which require a defendant to perform a particular act, and prohibitory injunctions, which require a defendant to cease or refrain from performing a particular act.

Injunctions can also be divided by time—preliminary injunctions and permanent injunctions. A plaintiff seeking a preliminary injunction must establish that she is likely to succeed on the merits, that she is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in her favor, and that an injunction is in the public interest.[2] Injunctive relief is not automatic even when plaintiffs have proven a statutory violation.[3] Rather, as articulated by the U.S. Supreme Court in several cases, courts "must balance the competing claims of injury and must consider the effect on each party of the granting or withholding of the requested relief."[4]

Courts can enforce injunctions by issuing contempt orders.[5]

A. Variety in Forms of Injunctive Relief

The scope of injunctive relief can be broad or narrow. Some of the breadth stems from the variety of defendants themselves. In the climate change context, injunctive relief against government defendants could conceivably involve dozens if not hundreds or thousands of affected public and private actors. But injunctive relief sought against a single private defendant or facility will necessarily be much narrower in scope.

Forms of injunctive relief can also vary. Of course, a court can enjoin the offending action. But a court can also issue a wide variety of other forms of injunctive relief. We highlight some of that variety here[6]:

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[1] Injunctions are typically limited to the parties before the court and within the court's jurisdiction. Nationwide injunctions are a more controversial form of judicial remedy that can block government regulations and policies from being enforced, not just against parties in a specific case but also against anyone else, nationwide. The propriety and constitutionality of nationwide injunctions is widely debated and is beyond the scope of this chapter.

[2] Winter v Natural Resources Defense Council, 555 U.S. 7 (2008).

[3] Weinberger v. Romero-Barcelo, 456 U. S. 305, 311-12 (1982).

[4] Amoco Production Co. v. Gambell, 480 U. S. 531, 542 (1987).

[5] Doug Rendleman, *Compensatory Contempt: Plaintiffs' Remedy When a Defendant Violates an Injunction*, 1980 U. ILL. L.F. 971, 971 (1980) (explaining criminal contempt, coercive contempt, and compensatory contempt as three different forms of contempt).

[6] This list was inspired by a list of possible injunctive remedies for violations of environmental law contained in ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, & SOCIETY 128 (5th ed. 2016).

- Decrees requiring consideration or use of innovative lower-carbon or zero-carbon technologies.
- Other conditional decrees, such as granting an injunction but making it operative at a specified future date unless the defendant remedies the problem (discussed by majority and dissenting opinions in *Boomer v. Atlantic Cement Co.*, Part VI below).
- Decrees requiring consideration or use of specific energy-efficiency technologies or energy conservation techniques.
- Decrees requiring consideration or use of specific carbon storage and/or carbon use techniques or technologies (e.g., soil carbon, geologic sequestration).
- Decrees requiring monitoring and reporting of GHG emissions.
- Decrees requiring public reporting of GHG emissions that are not already subject to public reporting.
- Decrees requiring restitution of profits gained from illegal or tortious conduct.
- Decrees requiring restoration of natural resources like wetlands and forests that serve as carbon sinks.
- Decrees requiring the construction and maintenance of specific measures to adapt to climate change.
- Appointment of post-decree monitors with subpoena power to oversee compliance with court order(s).
- Decrees requiring defendant(s) to periodically report to the court on compliance with the court's order(s).[7]
- Decrees imposing equitable receiverships on certain defendants.[8]
- Decrees requiring appointment of a special master under Rule 53 of the Federal Rules of Civil Procedure to address complex factual and procedural issues on a pre-trial or post-trial basis.

All these sound in equity. Of course, the appropriateness of any particular injunctive remedy depends on context. Remedies must be closely tied to the specific violations or breaches of legal obligations.

[7] *Cf.* National Wildlife Federation v. National Marine Fisheries Service., 839 F. Supp. 2d 1117, 1121 (D. Or. 2011); Michael C. Blumm & Aurora Paulsen, *The Role of the Judge in ESA Implementation: District Judge James Redden and the Columbia Basin Salmon Saga*, 32 STAN. ENV'T L.J. 87 (2013).

[8] Jason Feingold, *The Case for Imposing Equitable Receiverships Upon Recalcitrant Polluters*, 12 UCLA J. ENV'T L. & POL'Y 207 (1993).

B. Injunctive Relief in Statutory Cases

Courts frequently enjoin the government or other defendant(s) to simply comply with the relevant statute. By far, the largest number of cases in the database of climate litigation maintained by the Sabin Center on Climate Change Law at Columbia Law School involve alleged federal statutory violations—around 1,200 out of 1,600 at last count. Principal statutes are the National Environmental Policy Act (NEPA), the Clean Air Act (CAA), and the Endangered Species Act (ESA). Most of these cases fall under the judicial review provisions of the Administrative Procedure Act (APA); some are citizen suits authorized by, for example, the CAA, seeking to enforce violations of regulatory requirements or to compel performance of non-discretionary duties.

Box 1. Deciding the Appropriate Form of Injunctive Relief.

The Supreme Court in *Winter v Natural Resources Defense Council*, 555 U.S. 7 (2008), held that injunctive relief is not automatic in cases involving violations of environmental laws. Rather, courts must generally "balance the equities" and consider the effects of granting or denying an injunction as well as ways of tailoring injunctive relief in order to achieve the aims of the law in question without doing unnecessary harm to third parties or the public interest. For example, where a defendant has unlawfully filled a wetland but restoration would be unduly expensive with little chance of success, a court might order the defendant to purchase credits from an approved wetland mitigation bank to offset the loss of functions and values in the watershed.

Courts have ordered agencies to reconsider decisions to approve pipelines and other fossil fuel infrastructure projects for failure to take climate change into account and in some cases ordered licensing agencies to quantify the economic as well as environmental costs of adding more carbon pollution to the atmosphere.

The APA cases largely involve challenges to discretionary actions or inaction under the arbitrary and capricious standard (e.g., failure to follow prescribed procedures, consider relevant factors, or explain the choices made). Where no citizen suit applies, cases may also be filed under the APA to enforce mandatory duties such as promulgation or revision of rules in accord with statutory deadlines.

NEPA plays a particularly prominent role in many of these cases. It requires federal agencies to prepare an environmental impact statement (EIS) for proposed major federal actions that may significantly affect the quality of the human environment. In addition to considering the direct and cumulative effects of proposed actions, NEPA requires an agency to evaluate the indirect effects, "which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable." Moreover, in determining what effects are reasonably foreseeable, an agency must engage in "reasonable forecasting and speculation." NEPA also requires agencies to consider alternatives to the proposed action, including the alternative of no action. While these duties may not exist in a particular agency's authorizing statute, NEPA mandates that they must be considered before decisions are made and the information disclosed to the public.

Some cases involve failure to consider the cumulative GHG emissions resulting from the leasing of coal or oil and gas deposits on public lands and in offshore waters. Others involve licensing or permitting fossil fuel infrastructure such as pipelines, railroads, or export terminals. Courts often

require agencies to quantify, using the best available information, the amount of carbon emissions that can be expected from decisions authorizing the extraction and transportation of fossil fuels.

An example of how U.S. courts deal with injunctive relief in NEPA cases is *High Country Conservation Advocates v. U.S. Forest Service*.[9] The case was a challenge to U.S. Forest Service approval of on-the-ground coal mining exploration on federal land, an action that triggers the environmental impact analysis in NEPA. The case also involved the "social cost of carbon" (SCC), an estimate of the economic damages that would result from emitting each additional ton of GHGs into the atmosphere. The SCC is used in benefit-cost analysis to quantify the dollar-value of a policy's effect on climate change due to changes in GHG emissions. The court acknowledged the uncertainties involved in estimating the costs of methane emissions from coal mining but faulted the agency for not employing the SCC tool that had been developed by a federal interagency work group. The court noted: "Even though NEPA does not require a cost-benefit analysis, it was nonetheless arbitrary and capricious to quantify the benefits of the lease modifications and then explain that a similar analysis of the costs was impossible when such an analysis was in fact possible and was included in an earlier draft EIS." In consequence, the court enjoined any exploration activity that involved above-ground or below-ground disturbances.

C. Injunctive Relief in Constitutional Cases

Some of the most important cases, and some of the most ambitious remedies, have been sought in cases invoking federal and state constitutions in the United States, and national constitutions in other countries.

1. Federal Constitutional Cases

The most ambitious climate change cases brought to date have been brought against governments based on claimed constitutional violations. Plaintiffs in these cases have often sought injunctive relief as well as declaratory relief. As explained in Part III, declaratory relief does not command performance of specific actions or sanction noncompliance. Nonetheless, it is a binding court judgment defining the legal relationship of the parties and their rights in a matter before the court.

Our Children's Trust (OCT), a nonprofit organization representing youth plaintiffs, has led the charge seeking to establish a constitutional right to a safe climate. *Juliana v. United States* is perhaps OCT's best-known case. In 2015, 21 youth plaintiffs sued the United States in federal district court in Oregon, claiming the nation is facing a climate emergency, that the federal government has known the dangers of climate change for decades, and that the federal government nonetheless has "created and enhanced dangers through fossil fuel extraction, production, consumption, transportation, and exportation." They alleged violations of substantive due process under the Fifth Amendment, equal protection under the Fourteenth Amendment, the unenumerated rights of the people under the Ninth Amendment, and the public trust doctrine. The Plaintiffs' core claim is

[9] High Country Conservation Advocates v. U.S. Forest Service, 52 F. Supp. 3d 1174 (D. Colo. 2014).

probably in substantive due process—that the government's actions interfered with their right to a "climate system capable of sustaining human life."

They sought both injunctive and declaratory relief. As framed in the complaint, the injunctive relief sought included an unprecedented court order that defendants "prepare and implement an enforceable national remedial plan to phase out fossil fuel emissions and draw down excess atmospheric carbon dioxide so as to stabilize the climate system and protect the vital resources on which Plaintiffs now and in the future will depend." This plan, they argued, should be comprehensive and science-based, in line with the recommendations of the Intergovernmental Panel on Climate Change (IPCC) and a broad consensus of the scientific community here and abroad. Their requested declaratory relief included a request for a judicial declaration that Defendants are violating Plaintiffs' fundamental rights and the public trust doctrine.[10]

In 2016, U.S. District Court Judge Anne Aiken issued a strong ruling that the plaintiffs had asserted a colorable constitutional claim and made a prima facie case for standing. Judge Aiken's order bifurcated the case between liability and remedy with the explicit understanding that if the case got to the remedy phase, there would be a separate proceeding to explore a range of possible remedies. That carefully staged approach was truncated when federal defendants under the Barack Obama and Donald Trump Administrations were able, with help from the Supreme Court, to engineer an interlocutory appeal that resulted in a 2-1 decision in 2020 by a U.S. Court of Appeals for the Ninth Circuit panel dismissing the case on the grounds that the plaintiffs lacked Article III standing.[11]

The panel concluded that Plaintiffs had demonstrated concrete and particularized injury. It also concluded that there was at least a genuine factual dispute about whether federal policies were a substantial factor in causing Plaintiffs' injuries. But, the panel concluded, the injuries claimed by Plaintiffs were not redressable. The panel held that it is "beyond the power of an Article III court to order, design, supervise, or implement the plaintiffs' requested remedial plan where any effective plan would necessarily require a host of complex policy decisions entrusted to the wisdom and discretion of the executive and legislative branches."

Judge Josephine Staton issued a forceful dissenting opinion: "Seeking to quash this suit, the government bluntly insists that it has the absolute and unreviewable power to destroy the Nation." On the issue of redressability, the dissenting judge wrote: "Properly framed, a court order—even one that merely postpones the day when remedial measures become insufficiently effective—would likely have a real impact on preventing the impending cataclysm. Accordingly, I conclude that the court could do something to help the plaintiffs before us. And 'something' is all that standing requires."[12] After denying a petition for rehearing en banc, the Ninth Circuit vacated Judge Aiken's 2016 ruling and remanded the case to the lower court.

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[10] They also requested declarations that Section 201 of the Energy Policy Act is unconstitutional and that DOE/FE Order No. 3041, granting long-term multi-contract authorization to Jordan Cove Energy for liquified natural gas exports from its Coos Bay terminal, is unconstitutional.

[11] *Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020).

[12] For a commentary on the forcefulness of the dissent, see Robinson Meyer, *A Climate-Lawsuit Dissent That Changed My Mind*, THE ATLANTIC, Jan. 22, 2020, https://www.theatlantic.com/science/archive/2020/01/read-fiery-dissent-childrens-climate-case/605296/.

2. State Constitutional and Public Trust Cases

OCT has brought or supported similar cases in a wide variety of state courts. They tend to feature a diversity of youth plaintiffs, and typically raise claims based on state constitutional provisions for a right to a healthy environment and the common-law public trust doctrine. Plaintiffs generally seek injunctive relief in the form of court-ordered reductions in GHG emissions as well as declaratory relief. In the main, these cases have not succeeded. In some of these cases, courts have decided that the public trust doctrine does not apply to climate change or does not exist in the particular state. But a great many of these cases were dismissed under a variety of justiciability or procedural rules based on the sweeping nature of the injunctive relief that was sought.

For example, in *Reynolds v. State of Florida,* the Florida Court of Appeal affirmed the dismissal of a lawsuit brought by eight young people alleging that state officials violated their fundamental rights to a stable climate system under Florida common law and the Florida Constitution. They sought declaratory relief and an injunction requiring the state to bring Florida's energy system into compliance with the Constitution. The appellate court agreed with the lower court that the lawsuit raised nonjusticiable political questions.[13]

Another example is *Kanuk ex rel. Kanuk v. Alaska Department of Natural Resources*, where the Alaska Supreme Court affirmed the dismissal of an action brought by six children under the Alaska Constitution and the public trust doctrine against the state of Alaska seeking to impose obligations on the state to address climate change.[14] Plaintiffs requested the court to (1) declare that the state's obligation to protect the atmosphere be "dictated by best available science and that said science requires carbon dioxide emissions to peak in 2012 and be reduced by at least 6% each year until 2050"; (2) order the state to reduce emissions "by at least 6% per year from 2013 through at least 2050"; and (3) order the state "to prepare a full and accurate accounting of Alaska's current carbon dioxide emissions and to do so annually thereafter." The court concluded that these three claims are non-justiciable, largely because of "the impossibility of deciding [them] without an initial policy determination of a kind clearly for nonjudicial discretion."

The *Kanuk* holding was recently reinforced in *Sagoonick v. State of Alaska*,[15] where OCT sought an order mandating that the state develop a "climate recovery plan" that is "consistent with global emissions reduction rates necessary to stabilize the climate system," and that the court retain jurisdiction to see that the state complied. The Alaska Supreme Court declined, invoking the political question doctrine "because it requires a legislative policy judgment." Acknowledging the challenge of persuading the legislature to adopt the desired plan, the court nonetheless concluded that "having a majority of elected legislators disagree with or lack the political will to enact or implement plaintiffs' preferred policies does not justify an unconstitutional judicial remedy."

On June 22, 2022, OCT filed suit in *Navahine F. v. Hawai'i Department of Transportation*, claiming that the state DOT's operation of a fossil fuel-dependent transportation system violates their state constitutional rights to a clean and healthy environment and the public trust doctrine. Plaintiffs are

[13] Reynolds v. State of Florida, Case No. 2018-CA-819 (Circuit Civil), Circuit Court for the Second Judicial District, Order Granting Motions to Dismiss With Prejudice, June 10, 2020, *aff'd per curiam*, First District Court of Appeal, May 18, 2021.

[14] Kanuk ex rel. Kanuk v. State, Dept. of Natural Resources, 335 P.3d 1088 (Alaska 2014).

[15] Sagoonick v. State of Alaska, 503 P.3d 777 (Alaska 2022).

seeking injunctive relief ordering the state to "take concrete action steps under prescribed deadlines to conform the state transportation system" with its trustee duties and the plaintiffs' constitutional rights. They are also seeking declaratory relief that DOT's operation of the state's transportation system breaches its duties as trustee under the Hawai'i Constitution.[16] The Hawai'i Supreme Court has ruled that "The Hawai'i Constitution offers vast and versatile public trust protections."[17] And it has recognized that climate change and GHG emissions pose serious threats to public trust resources.[18] But it has also said that these protections must be weighed against other needs of the Hawai'ian people.[19] It is too soon to predict how this balance will be struck in the *Navahine F.* case.

3. Constitutional and Other Cases Outside United States

Courts in other countries have been more willing to issue broader injunctive relief against their governments. They have been much more open to rights-based claims under national constitutions and international law such as the European Convention on Human Rights (ECHR). In two of these cases, there were national laws directing specified reductions in GHG emissions, and the question before the court was whether these laws were sufficiently ambitious. In three other cases, the courts employed prods or nudges to encourage governments to take faster action, issued somewhat narrowed injunctive relief, or both. In these cases, and particularly the latter three, the injunctive relief sought was narrower in scope than that sought in *Juliana* and the OCT cases described above.

In the famous *Urgenda* case, the Dutch Supreme Court held in 2020 that the government has a duty of care to guard against the threats of climate disruption.[20] The Court found this duty is based in part on the Dutch Constitution and tort law but relied heavily on Articles 2 and 8 of the ECHR regarding the rights to life and family autonomy. The Court affirmed lower court orders directing the government to reduce emissions by 25% by 2020 compared to 1990 levels (as opposed to the 20% reduction to which it was already committed). This level of reduction, the Court said, is in line with recommendations from the IPCC as well as pledges the Netherlands had made pursuant to the Paris Agreement.

The Court rejected the government's argument that unilateral reductions by the Netherlands would be inconsequential, finding that both Article 3(1) of the UN Framework Convention on Climate Change (stating the principle that parties should protect the climate system for the benefit of present and future generations) and the "no harm principle" of customary international law underpin the

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[16] Navahine F. v. Hawai'i Department of Transportation, No. 1CCV-22-0000631, First Circuit Court, June 1, 2022, http://climatecasechart.com/wp-content/uploads/sites/16/case-documents/2022/20220601_docket-1CCV-22-0000631_complaint.pdf.

[17] In re Maui Elec. Co., No. SCOT-21-0000041, slip op. at 15 (Haw. Mar. 4, 2022).

[18] In re Maui Elec. Co., 141 Hawai'i 249, 263, 408 P.3d 1, 15 (2017).

[19] Kauai Springs, Inc. v. Planning Comm'n of Kaua'i, 133 Hawai'i 141, 173, 324 P.3d 951, 983 (2014) ("If there is a reasonable allegation of harm to one of the uses protected by the public trust, then the [permit] applicant must demonstrate that there is no harm in fact or that any potential harm does not preclude a finding that the requested use is nevertheless reasonable and beneficial."

[20] State of the Netherlands (Ministry of Economic Affairs and Climate Policy v. Urgenda Foundation, http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2020/20200113_2015-HAZA-C0900456689_judgment.pdf.

individual responsibility of nation states to take measures to address climate change. It held that "each country is responsible for its part and can therefore be called to account in that respect."

In response, the Dutch government not only fully complied with the Court's order, but instituted more aggressive economywide measures to drive further reductions. The relief granted in *Urgenda* is narrower than the injunctive relief sought in *Juliana* because the *Urgenda* relief required only an additional five percent reduction in GHG emissions, not a court-ordered plan to entirely phase out fossil fuel-based GHG emissions.

In another landmark decision, the German Constitutional Court, Germany's highest court, ruled that some aspects of the country's climate protection legislation are unconstitutional because they place too much of the burden for reducing GHG emissions on younger generations.[21] The Court reasoned that Germany's 2019 Climate Change Act was incompatible with fundamental rights guaranteed under Article 2 of the Basic Law (Germany's Constitution) because it failed to mandate sufficient provisions for emission cuts beyond 2030.

The Court stated: "The statutory provisions on adjusting the reduction pathway for GHG emissions from 2031 onwards are not sufficient to ensure that the necessary transition to climate neutrality is achieved in time." The Court adopted the principle of a "carbon budget" and said the legislature must design a plan to limit warming to well below 2°C and, if possible, to 1.5°C. The Court further found that the legislature had not proportionally distributed the budget between current and future generations, writing "one generation must not be allowed to consume large parts of the CO_2 budget under a comparatively mild reduction burden if this would at the same time leave future generations with a radical reduction burden . . . and expose their lives to serious losses of freedom." Like the *Urgenda* decision, the Court obliged the government to strengthen in specific ways an emissions reduction law that was already in place.

Following this ruling, the German government adopted the necessary legal changes to speed up the country's bid for climate neutrality, aiming to hit the goal five years earlier, in 2045. The cabinet approved measures stepping up the 2030 target for emission cuts to 65 percent (from 55 percent), tougher emission budgets in all sectors, and new annual reduction targets for the 2030s.

In the first decision addressing governmental duties related to climate change adaptation, and the first from the Global South, the Lahore High Court, known as the Green Bench, ruled in *Ashgar Leghari v. Pakistan* in 2015 that climate change is "a defining challenge of our time" and sounded "a clarion call for the protection of fundamental rights of the citizens of Pakistan."[22] When the case was brought, the government had a climate action law or Framework, which included provisions for climate change adaptation. Judge Syed Mansoor Ali Shah determined that "the delay and lethargy of the State in implementing the Framework offend the fundamental rights of the citizens." Invoking the right to life and the right to dignity protected by the Constitution of Pakistan and international

[21] Neubauer et al. v. Germany, Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court], Mar. 24, 2021, Case No. BvR 2656/18/1, BvR 78/20/1, BvR 96/20/1, BvR 288/20; https://www.bundesverfassungsgericht.de/SharedDocs/Downloads/EN/2021/03/rs20210324_1bvr265618en.pdf;jsessionid=85F1AEF98EEBD918FB321D3BD079E9F7.2_cid344?__blob=publicationFile&v=5.

[22] Ashgar Leghari v. Pakistan, http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2015/20150404_2015-W.P.-No.-25501201_decision.pdf.

principles, including intergenerational equity and the precautionary principle, Judge Ali Shah called for greater attention to climate justice.

For a remedy, Judge Ali Shah ordered the formation of a Climate Change Commission comprised of representatives of the key ministries, nongovernmental organizations, and technical experts to ensure implementation of the Framework. In a subsequent order, he listed each official appointed as a "focal person" on climate change and the members of the Climate Change Commission.[23] The Green Bench retained jurisdiction to monitor and receive reports from the Commission concerning its progress. An interesting and important feature of the Court's orders is the use of prodding devices or nudges, such as creation of the Climate Change Commission and retention of jurisdiction. It did not second-guess the government's policy choices.

Two other decisions deserve mention in the context of what kinds of claims and remedies courts in other countries with similar rules of separation of powers are willing to consider. In *Future Generations v. Ministry of the Environment and Others*, a group of 25 youth plaintiffs sued the Colombian government and several other entities, arguing that the government's failure to prevent deforestation violates plaintiffs' fundamental environmental rights. The Supreme Court of Colombia in 2018 recognized that the fundamental constitutional rights of life, health, subsistence, freedom, and human dignity were substantially linked to the environment and the Amazon Basin ecosystem. The Court ordered the government to formulate and implement action plans to address deforestation and illegal logging in the Amazon region. While this is no mean task, it does not involve the entirety of the government's GHG reduction effort. Progress has been slow, but the Court has retained jurisdiction to prod the government.

On June 30, 2022, Brazil's Supreme Court became the first in the world to recognize the Paris Agreement as a human rights treaty.[24] The judgment was the culmination of a lawsuit filed in 2020 against the Brazilian federal government by four political parties, including the Brazilian Socialist Party and Sustainability Network. The Court ruled: "Treaties on environmental law are a type of human rights treaty and, for that reason, enjoy supranational status." The Court ordered the government to reactivate the climate fund (Fundo Clima) set up in 2009 as part of Brazil's national climate policy plan to carry out projects and studies to reduce GHG emissions. The fund had been inoperative since 2019. The Court said the Executive Branch cannot invoke separation of powers to justify an omission in its duty to act on climate change and ordered the government to prepare and present annual plans for allocating resources and disburse funds to climate mitigation projects. Here again, the remedy is relatively narrow in scope.

III. Writ of Mandamus

A writ of mandamus is in many ways a specific form of injunctive relief, but it is discussed separately here because it has different origins (as an extraordinary writ or remedy) and is governed by different

[23] Ashgar Leghari v. Pakistan, http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2018/20180125_2015-W.P.-No.-25501201_judgment.pdf.
[24] Maria Antonia Tigre, *Brazilian Supreme Court Recognizes the Paris Agreement as a Human Rights Treaty*, Climate Law Blog, Sabin Center on Climate Change Law (July 1, 2022).

legal rules. Federal courts have authority to issue mandamus under the All-Writs Act.[25] Courts use a writ of mandamus "to compel a public officer to carry out a ministerial duty about which the office had no discretion."[26] A petitioner seeking mandamus must first establish that the agency has violated "a crystal-clear legal duty" and that it "has no other adequate means to attain the relief it desires."[27] "[E]even when a clear duty exists, [courts] consider whether judicial intervention would be appropriate because the writ of mandamus is a drastic remedy reserved for extraordinary circumstances."[28] For purposes of mandamus relief, the public officer can be a government official or a lower court judge.

Box 2. Successful Use of Mandamus in Environmental Case.

In spite of stringent requirements, courts sometimes issue mandamus relief in environmental cases. For example, in *In Re: Center for Biological Diversity*, 53 F.4th 665 (D.C. Cir. 2022), the court granted a writ of mandamus compelling EPA to complete by a date certain a long-delayed assessment of the risk to endangered species of the pesticide cyantraniliprole. The court explained: "Eight years ago, the Environmental Protection Agency registered a new pesticide without first determining, as required by the Endangered Species Act, whether it would have an adverse effect on endangered species. Then, five years ago, our court ordered EPA to fulfill that statutory obligation. Notwithstanding Congress's mandate and our order, EPA has failed to make the required determination."

After the federal district court's decision to proceed to trial in *Juliana*, but before the Ninth Circuit dismissed the case, the federal government twice petitioned for a writ of mandamus to the Ninth Circuit, asking the court to dismiss the case "or, in the alternative, to stay all discovery and trial." Both times, the Ninth Circuit denied the writ.[29] The federal government in both cases claimed that it was trying to prevent burdensome discovery at the district court level into the ways in which it had fostered GHG emissions over decades. But in both cases, the Ninth Circuit said this issue was better addressed in the context of specific discovery requests over the regular course of litigation. Of particular importance in the second case was the fact that "the government has not challenged a single specific discovery request, and the district court has not issued a single order compelling discovery."[30]

An example of the unsuccessful use of mandamus at the state level is *Funk v. Wolf*, a 2016 Pennsylvania Commonwealth Court decision.[31] In that case, also an OCT case, the plaintiffs had initially filed a petition with the Pennsylvania Environmental Quality Board (EQB) seeking the adoption of a regulation limiting GHG emissions to prevent undue climate disruption, without including a specific regulation or even a specific regulatory approach. Based on the Pennsylvania Department of Environmental Protection's (DEP's) representation that it was already responding to climate disruption, the EQB denied the petition and the plaintiffs failed to appeal, despite the fact

[25] 28 U.S. Code §1651.
[26] DAN B. DOBBS & CAPRICE L. ROBERTS, LAW OF REMEDIES: DAMAGES-EQUITY-RESTITUTION §2.9(1) (3d ed. 2018).
[27] In re Core Communications, 531 F.3d 849, 860 (D.C. Cir. 2008).
[28] In re National Nurses United, 47 Fed. 4th 746, 752-53 (D.C. Cir. 2022).
[29] In re United States, 895 F.3d 1101 (9th Cir. 2018); In re United States, 884 F.3d 830 (9th Cir. 2018).
[30] In re United States, 895 F.3d at 1105.
[31] Funk v. Wolf, 144 A.3d 228 (Pa. Commw. Ct. 2016).

that Pennsylvania DEP's actions were largely tokens. Instead of appealing, the plaintiffs then brought a mandamus action in the Commonwealth Court against the state, the governor, Pennsylvania DEP, and other agencies seeking to compel broad but still, unspecified action to conduct a study and to adopt regulations limiting GHG emissions to prevent climate disruption. The court dismissed the case because no statute or regulation mandated such relief.

IV. Declaratory Relief

When a court grants declaratory relief, it provides a binding judicial statement of the rights of the parties in a particular matter. The most common form of declaratory relief is the declaratory judgment. The Federal Declaratory Judgment Act, which applies to declaratory judgments sought in federal court, provides:

> In a case of actual controversy within its jurisdiction, . . . any court of the United States, upon the filing of an appropriate pleading, may declare the rights and other legal relations of any interested party seeking such declaration, whether or not further relief is or could be sought. Any such declaration shall have the force and effect of a final judgment or decree and shall be reviewable as such.[32]

Similar statutory provisions apply in state litigation.[33] Declaratory relief is available in constitutional cases as well as those involving statutes.[34] Unlike injunctive relief, a declaratory judgment does not expressly require a party to do anything. Still, declaratory relief puts defendants "on notice of the constitutional violations" so they can "remed[y] the violations on their own initiative."[35] Because it provides an authoritative statement of the rights of the parties, a declaratory judgment conveys an expectation that government officials will abide by it.[36] In some cases, a court may be able to award declaratory relief sooner than injunctive relief. On the other hand, a court has greater ability to manage the parties on a continuing basis through injunctive relief, including through the issuance of contempt orders.[37]

When a plaintiff seeks both injunctive and declaratory relief, as often happens in climate cases, a court has a duty to analyze the declaratory relief request separately from the request for injunctive relief.[38] Similarly, a court may grant declaratory relief even if it decides not to grant injunctive or mandamus relief.[39]

Three state court examples illustrate the use of declaratory relief in climate cases. The attempt to reframe the *Juliana* case to seek only a declaratory judgment on the constitutional claims provides a fourth example.

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[32] 28 U.S.C. §2201.
[33] *See, e.g.*, 42 PA. CON. STAT. §7532.
[34] Samuel L. Bray, *The Myth of the Mild Declaratory Judgment*, 63 DUKE L.J. 1091, 1120 (2014).
[35] Harvard L. Rev. Ass'n, *Substantive Limits on Liability and Relief*, 90 HARV. L. REV. 1190, 1248-49 (1977).
[36] *Utah v. Evans*, 536 U.S. 452, 463-64 (2002).
[37] *See generally* Bray, *supra* note 34.
[38] *Zwickler v. Koota*, 389 U.S. 241, 254 (1967).
[39] *Powell v. McCormack*, 395 U.S. 486, 499 (1969).

In *Kanuk ex rel. Kanuk v. Alaska Department of Natural Resources*, discussed above, where the Alaska Supreme Court dismissed plaintiffs' claims for injunctive relief, the court also dismissed their claims for declaratory relief.[40] The court held that the plaintiffs' remaining requested remedies were of the sort within the institutional competence of the judiciary: a declaratory judgment that (1) "the atmosphere is a public trust resource under [a]rticle VIII"; (2) the state therefore "has an affirmative fiduciary obligation to protect and preserve" it; (3) the state's duty is "enforceable by citizen beneficiaries of the public trust"; and (4) with regard to the atmosphere, the state "has failed to uphold its fiduciary obligation." The court nonetheless held that these claims should be dismissed on prudential grounds. The court reasoned that a declaratory judgment on the scope of the public trust would neither compel the state to take any particular action nor advance the plaintiffs' interests.

By contrast, in *Kain v. Massachusetts Department of Environmental Protection*,[41] the Massachusetts Supreme Judicial Court (SJC) held that Massachusetts DEP (MassDEP) was required by statute to adopt specific regulatory targets to reduce GHG emissions. Plaintiffs challenged MassDEP's compliance with the Commonwealth's Global Warming Solutions (GWS) Act, seeking injunctive relief or a writ of mandamus. A lower court upheld MassDEP's compliance and dismissed the case. On appeal, the SJC reversed. Rejecting the DEP's argument that it should be given deference in how to interpret the legislative mandate, the SJC said "this court will not hesitate to overrule agency interpretations of statutes or rules when those interpretations are arbitrary or unreasonable." The court went on to find that the GWS Act unambiguously imposes an obligation on MassDEP to promulgate firm GHG emissions limits (as opposed to the soft "targets" the agency advocated).

The SJC vacated the lower court decision and remanded the case to that court "for entry of a judgment declaring that [the statute] requires the department to promulgate regulations that address multiple sources or categories of sources of greenhouse gas emissions, impose a limit on emissions that may be released, limit the aggregate emissions released from each group of regulated sources or categories of sources, set emission limits for each year, and set limits that decline on an annual basis."

Declaratory relief of this kind is not the same as injunctive or mandamus relief, because the SJC did not actually order MassDEP to adopt these regulations; it simply declared that the agency had a legal obligation to do so. Still, the obvious next step for continued agency recalcitrance would be an action for injunctive or mandamus relief based on the declaratory relief already granted—relief that would be highly likely to be granted. This case differs from the Alaska case, where there was no statute or other law explicitly requiring GHG emissions, because the legislature in the GWS Act had already stated what MassDEP was required to do.

The third state case is in Montana. OCT, which as shown above has had little if any success in obtaining injunctive relief, has managed to crack the door open there, in *Held v. State,* albeit limited to declaratory relief on several discrete issues.[42]

[40] Kanuk ex rel. Kanuk v. State, Dep't of Nat. Res., 335 P.3d 1088 (Alaska 2014).
[41] Kain v. Mass. Dep't of Env't Prot., 49 N.E. 3d 1124 (Mass. 2016).
[42] Held v. Montana, Dist. Ct. Lewis & Clark County (Aug. 4, 2021), tinyurl.com/3jmzet6d.

The Montana Constitution provides: "All persons are born free and have certain inalienable rights. They include the right to a clean and healthful environment. . . ."[43] Plaintiffs' complaint sought injunctive relief in Montana state court based on the Montana Constitution in the form of orders directing the defendants to prepare an accounting of Montana's GHG emissions and to develop and implement a remedial plan to reduce emissions "consistent with the best available science and reductions necessary to protect Youth Plaintiffs' constitutional rights from further infringement. . . ." The Montana First Judicial District Court denied injunctive relief, holding that ordering and overseeing the development of such a plan would force it to make policy judgments for which courts are not suited.

The District Court nonetheless allowed the request for declaratory relief to move ahead. Montana's Environmental Policy Act (MEPA), modeled on the National Environmental Policy Act (NEPA), requires a detailed environmental review of a wide range of proposals before they can be carried out. After the legislature created an exception to MEPA review for certain arsenic discharges, the Montana Supreme Court in a landmark 1999 opinion held that exception to violate the right to a "clean and healthful environment."[44] Similarly, the 16 youth plaintiffs in *Held* are seeking declaratory relief that the Montana Legislature violated their right to a "clean and healthful environment" by adopting a significant climate change exception to MEPA. In the climate change exception, the Montana Legislature directed that environmental review under MEPA may not include "actual or potential impacts that are regional, national, or global in nature." The state also adopted an Energy Policy that strongly favors fossil fuels.

Plaintiffs requested declaratory relief on the constitutionality of the climate change exception to MEPA and the Energy Policy. On the issue of standing, the District Court held that the plaintiffs alleged sufficient facts to satisfy the state's prudential standing requirements for declaratory relief on these issues. If the plaintiffs succeed, the court said it was prepared to issue a declaratory judgment that the climate change exception and/or Energy Policy are unconstitutional but would not decide how the political branches should address it.

On June 14, 2022, the Montana Supreme Court denied the state's request for a Writ of Supervisory Control seeking a delay in discovery.[45] Trial is expected in summer 2023.

In the *Juliana* case, where the Ninth Circuit vacated and remanded Judge Aiken's decision to the federal district court, plaintiffs filed a motion to amend the complaint. In that motion, they dropped their request for injunctive relief and now seek primarily declaratory relief (e.g., a declaration that the U.S. national energy system violates the Constitution and public trust). That motion has been briefed and argued before Judge Aiken and is awaiting a decision. The decision turns on the question whether declaratory judgment alone without injunctive relief is likely to redress the harm that climate change is causing the plaintiffs.

V. Remand

[43] MONT. CONST. Art. II, §3.
[44] Montana Env't Info. Ctr. v. Dep't of Env't Quality, 988 P.2d 1236 (Mont. 1999).
[45] State of Montana v. Montana First Judicial District Court, OP 22-0315, June 14, 2022.

In cases challenging government agency action or inaction, the challenged administrative actions take many forms, including planning, permitting, leasing, and funding. Plaintiffs seek preparation of environmental impact assessments, consultation with expert agencies, public disclosure of accurate information, and provision of meaningful opportunities for public involvement. These cases assert procedural rights based on statutes and regulations or other administrative instruments having the force of law. The remedies typically involve remands to the agencies to correct errors and sometimes result in the underlying actions being vacated or enjoined pending compliance. The remedy of vacatur of agency rules and authorizations is discussed further below, in Part V.

Remand is a common remedy in cases where a court finds that an administrative agency or other government defendant has violated the law. The court in such cases essentially orders the agency to comply with the relevant statute.

A useful and relevant example of the remand remedy is in *Massachusetts v. EPA*, the landmark Supreme Court decision holding that GHGs are air pollutants under the CAA.[46] The relevant statutory provision in that case, Section 202(a)(1) of the CAA, requires EPA to regulate air pollutants emitted by motor vehicles which, in the EPA Administrator's "judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. . . ."[47] In this case, EPA decided not to regulate greenhouse gases based on policy and other reasons, including the existence of nonregulatory programs for GHG emissions and EPA's view that regulation "would be unwise . . . at this time."

The Supreme Court remanded the case to EPA to make its decision on whether to regulate GHGs based on Section 202(a)(1). It explained:

> In short, EPA has offered no reasoned explanation for its refusal to decide whether greenhouse gases cause or contribute to climate change. Its action was therefore "arbitrary, capricious, . . . or otherwise not in accordance with law." We need not and do not reach the question whether on remand EPA must make an endangerment finding, or whether policy concerns can inform EPA's actions in the event that it makes such a finding. We hold only that EPA must ground its reasons for action or inaction in the statute.[48]

On remand, EPA made a formal finding that "six greenhouse gases taken in combination endanger both the public health and the public welfare of current and future generations."[49] The endangerment finding was then challenged before the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit, which unanimously upheld the finding.[50]

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[46] Massachusetts v. EPA, 549 U.S. 497 (2007).
[47] 42 U.S.C. §7521(a)(1).
[48] 549 U.S. at 534-35 (internal citations omitted).
[49] Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496, 66496 (Dec. 15, 2009) (codified at 40 C.F.R. ch. I). The six gases are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. *Id.* at 66,497.
[50] Coal. for Responsible Regul. v. Env't Prot. Agency, 684 F.3d 102 (D.C. Cir. 2012), *rev'd in part on other grounds sub nom.* Util. Air Regul. Grp. v. Env't Prot. Agency, 134 S. Ct. 2427 (2014).

VI. Vacatur

If the court does remand, another issue is whether to vacate the decision or leave it in place while the agency addresses the legal problem(s) identified by the court.[51] Where the plaintiff shows an agency failure to comply with NEPA, for example, courts typically vacate the decision and remand it to the agency to allow it to find a legally satisfactory way to address the issue. Vacatur "'is the normal remedy' when [a court is] faced with unsustainable agency action."[52]

In some instances, vacatur can obviate the need for injunctive relief. In *Monsanto Co. v. Geertson Seed Farms*,[53] the Supreme Court held that, where vacatur of an agency action would redress a plaintiff's injury, no recourse to the additional and extraordinary relief of an injunction was warranted. In that case, the lower court vacated the Animal and Plant Health Inspection Service (APHIS) rule deregulating the use of genetically engineered Round Up Ready Alfalfa (RRA) pending compliance with NEPA. The respondent organic farmer sought a nationwide injunction against any attempt by the U.S. Department of Agriculture to partially deregulate RRA pending completion of a new EIS. Writing for the majority, Justice Samuel Alito said that respondents had failed to prove irreparable harm and that "if and when APHIS pursues a partial deregulation that arguably runs afoul of NEPA, respondents may file a new suit challenging such action and seeking appropriate preliminary relief."

In climate-related cases, too, courts sometimes vacate agency decisions and remand them to the agency without enjoining them. That issue was addressed in 2022 in *Friends of the Earth v. Haaland*,[54] one of many lawsuits brought against federal oil and gas leasing programs under the banner of "keep it in the ground." In that case, Judge Rudolph Contreres of the D.C. Circuit called a halt to the largest oil and gas sale in history, spanning some 80 million acres in the Gulf of Mexico. The court held that the Bureau of Ocean Energy Management (BOEM) violated NEPA by failing to properly evaluate the "no action" alternative required under NEPA regulations. In this instance, no action would mean no lease sale. So, the question was the effect on world production of oil and corresponding emissions if the sale did not go forward. BOEM took the counterintuitive position: "That total GHG emissions would actually be higher if no lease sales took place." After a searching examination of the numerous technical studies in the record, Judge Contreres disagreed, pointing to evidence indicating that foreign consumption was likely to decrease and concluding that BOEM did not explain why it was incapable of performing a more rigorous analysis.

A standard practice of courts is to vacate agency decisions that violate NEPA. The APA provides that an agency action "shall be set aside" upon a finding that it is arbitrary and capricious. As the court explained: "The default rule of vacatur thus serves to avoid creating perverse incentives for the agency to press forward with a faulty decision and fill in its analysis later." Nevertheless, courts have treated vacatur as an equitable remedy requiring a balancing of harms. The decision to vacate

[51] GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, 1 PUBLIC NATURAL RESOURCES LAW §8.56 (June 2022 Update).
[52] Brotherhood of Locomotive Eng'rs & Trainmen v. Fed. Railroad Admin., 972 F.3d 83, 117 (D.C. Cir. 2020) (quoting Allina Health Servs. v. Sebelius, 746 F.3d 1102, 1110 (D.C. Cir. 2014)).
[53] 561 U.S. 139 (2010).
[54] Friends of the Earth v. Haaland, 583 F. Supp. 3d 113 (D.D.C. 2022).

depends on the seriousness of the order's deficiencies (and thus the extent of doubt about whether the agency chose correctly) as well as the disruptive consequences of an interim change that may itself be changed.

Saying he did not "lightly discount the asserted harms that would flow from vacatur," Judge Contreres ultimately concluded that the seriousness of the flaws in the record outweighed the disruptive effects of vacatur, some of which he found to be overstated or speculative. He pointed to the fact that issuance of the leases could prejudice the reconsideration of the leasing decision by giving the oil companies stronger reliance arguments should BOEM ultimately decide that the scope of the sale should be reduced.

A final issue is whether a decision by a single federal district judge to vacate a rule or other administrative action has nationwide effect. The same issue arises with nationwide injunctions. The Supreme Court has yet to rule definitively on the question.[55]

Box 3. Vacatur Plus Injunction.

In the highly publicized Dakota Access Pipeline case, the D.C. Circuit ruled that the U.S. Army Corps of Engineers (the Corps) violated NEPA by failing to fully consider the risks to the Standing Rock Sioux Tribe's water supply of transporting tar sands crude oil across the Oahe Reservoir on the Missouri River. Judge James Boasberg vacated the Corps' grant of a permit and an easement for the pipeline, remanded the case to the Corps to prepare a new EIS, and ordered that the pipeline cease operation and be emptied of oil pending completion of a new EIS. On appeal, the D.C. Circuit upheld the vacatur of the easement and the remand for a new EIS, but lifted the injunction insofar as it "directs that the pipeline be shut down and emptied of oil." *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 985 F.3d 1032 (D.C. Cir. 2021). The D.C. Circuit held that the requirements for injunctive relief had not been met.

VII. Damages

Courts may also award damages—the payment of money in compensation for wrongdoing—in appropriate climate cases. Some damages are statutorily authorized, and some are authorized by common law.

A. Statutorily Authorized Damages

The U.S. Congress and state legislatures sometimes prescribe a remedy for breach of a statute, relieving courts from the obligation to craft a remedy. For example, a proposed federal climate change disclosure regulation under long-standing securities law could increase the number of cases in which such remedies are sought.

Under securities laws, publicly traded companies must disclose to their shareholders and boards information that is material to their business. According to the Supreme Court, "[a]n omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it important

[55] Mila Sohoni, *The Power to Vacate a Rule*, 88 GEO. WASH. L. REV. 1121 (2020).

in deciding how to vote."[56] "Put another way, there must be a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available." Publicly traded companies, for example, must publicly disclose "material pending legal proceedings" as well as expenditures that materially affect their financial condition.[57] Shareholders who believe they have been wronged by a company's failure to do so can sue for money damages, injunctive relief, and rescission of the transaction and restitution.[58]

In 2022, the Securities and Exchange Commission (SEC) proposed regulations to specify what material risk means in the context of climate change.[59] Among other things, the proposed rule would also require disclosure of GHG emission metrics covering Scope 1 (direct emissions), Scope 2 (indirect emissions, e.g. purchased electricity) for all companies, and Scope 3 (indirect emissions in value chain) emissions that are material, or if a company has set Scope 3 reduction targets as part of its ESG (Environmental Social Governance) commitments. When finalized, and assuming it survives the legal challenges that have already been threatened,[60] this rule may increase the number of shareholder lawsuits against publicly traded companies seeking remedies for false or misleading statements. In fact, the notice of proposed rulemaking acknowledges this possibility.[61]

B. Common-Law Actions

1. Federal Common-Law Claims: No Remedy

There is no remedy for federal common-law claims based on GHG emissions because the Supreme Court decided in *American Electric Power Co. v. Connecticut* in 2011 that this form of federal common law has been displaced.[62] In that case, Plaintiffs sued five power companies, "the five largest emitters of carbon dioxide" in the United States, that collectively emitted 25% of U.S. GHG emissions from electricity. They claimed violation of federal common law of interstate nuisance and state tort law. For a remedy, they sought an injunction capping each defendant's emissions and then reducing emissions by a specific annual percentage for at least a decade. The Court held that "Congress delegated to EPA the decision whether and how to regulate carbon-dioxide emissions from power

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[56] TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976).
[57] George S. Georgiev, *Too Big to Disclose: Firm Size and Materiality Blindspots in Securities Regulation*, 64 UCLA L. REV. 602, 606-07 (2017).
[58] Kurt M. Swenson, *Remedies for Private Parties Under Rule 10b-5*, 10 B.C. L. REV. 337, 338 (1969).
[59] Securities and Exchange Comm'n, The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 Fed. Reg. 21334 (Apr. 11, 2022 (to be codified at 17 C.F.R. Part 210, 229, 232, 239, and 249).
[60] The Supreme Court's decision in *West Virginia v. EPA*, __ U.S. __ No. 20-1530 (June 30, 2022, limiting EPA's authority to regulate GHGs from coal-fired power plants under the amorphous "major questions doctrine" could have implications for SEC's authority to require disclosure of the financial risks from climate change. *See e.g.*, *Implications of* West Virginia v. EPA *on Proposed SEC Climate Rules*, NAT'L L. REV. (July 1, 2022), https://www.natlawreview.com/article/implications-west-virginia-v-epa-proposed-sec-climate-rules.
[61] The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 Fed. Reg. 21334, 21444 (proposed Apr. 11, 2022) (to be codified at 17 C.F.R. pts. 210, 229, 232, 239, & 249) ("The proposed rules would significantly expand the type and amount of information registrants are required to provide about climate-related risks. . . . To the extent this leads to inadvertent non-compliance, registrants may face additional exposure to litigation or enforcement action.").
[62] Am. Elec. Power Co. v. Connecticut, 564 U.S. 410 (2011).

plants; the delegation . . . displaces federal common law." The court did not address the preemptive effect of the CAA on state common law.

In *Native Village of Kivalina v. Exxon Mobil Corp.*, the Ninth Circuit extended the ruling in *AEP* to also bar claims for monetary damages based on federal common law.[63] Like the Supreme Court in *AEP*, the Ninth Circuit declined to address the question whether state common law might provide a remedy. That question is addressed next.

2. State Common Law

a. Damages

By far, the most prominent state cases addressing climate change are combined tort and consumer protection cases seeking damages. To date, over a dozen lawsuits have been filed by cities, counties, and states against the major oil companies, seeking compensation for the damages caused by their allegedly tortious conduct. Their claims are framed in terms of state law, not federal law, due to the Supreme Court's 2011 decision in *AEP* that the federal CAA displaces the federal common law of nuisance. The claims in *Mayor and City Council of Baltimore v. BP* are illustrative. Baltimore has eight causes of action against BP and other major oil companies that are all under Maryland law. These are: (1) public nuisance; (2) private nuisance; (3) strict liability for failure to warn; (4) strict liability for design defect; (5) negligent design defect; (6) negligent failure to warn; (7) trespass; and (8) violations of the Maryland Consumer Protection Act (MCPA).[64] The core assertion is that the defendants have known about the dangers of climate change for 50 years, have even taken preventive actions to protect their own assets from climate change, and have engaged in a multi-decade campaign of deception and coordinated effort to block federal legislation such as the 2009 Waxman-Markey bill.[65] They also failed to warn their customers and shareholders of the need to transition from fossil fuels as soon as possible.

As a result, Baltimore claims, it suffers a variety of injuries related to climate change. These include "sea level rise and associated impacts, increased frequency and severity of extreme precipitation events, increased frequency and severity of drought, increased frequency and severity of heat waves and extreme temperatures," as well as "infrastructure damage during floods, automobile accidents and power outages when winter storms hit, and public-health illnesses amid heat waves." Baltimore is seeking compensatory and punitive damages, disgorgement of profits, and civil penalties under the MCPA.[66]

The evidence of this deceit is contained in the defendants' own documents unearthed by investigative reporters at the *Los Angeles Times* and *Inside Climate News*, as well as documents disclosed

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[63] Village of Kivalina v. Exxon Mobil Corp., 696 F.3d 849, 858 (9th Cir. 2012).
[64] Mayor & City of Baltimore v. BP P.L.C., 31 F.4th 178 (4th Cir. 2022).
[65] American Clean Energy and Security Act, H.R. 2454, 111th Cong. (2009). The bill would have established an economywide cap-and-trade program designed to reduce emissions by 83% below 2005 levels by 2050. The bill narrowly passed in the U.S. House of Representatives but died in the U.S. Senate.
[66] While the city is also seeking "equitable relief, including the abatement of the alleged nuisances and an injunction against future nuisances," it "does not seek to impose liability on Defendants for their direct emissions of greenhouse gases and does not seek to restrain Defendants from engaging in their business operations."

in response to fraud investigations by the New York and Massachusetts Attorneys General. More revelations are expected should one or more of the cases get to discovery.

Unlike the tobacco cases that are frequently cited as the "model" for this kind of mass tort litigation, where the money from the global settlement did not always go to anti-smoking programs or health care to the victims, the money sought in these cases would be set aside for abatement. In this case, that would mean adaptation measures to deal with sea-level rise, drought, floods, storms, wildfires, and other climate-related disasters. "Polluter-pays" is the idea behind these claims. Why should taxpayers have to foot the bill for damages made worse by the defendant's deceit?

Of course, all of this must be proven in court and the first question is which court—federal or state? The oil companies have launched a full court press to get the cases removed to federal court. So far, they have lost every round in the lower courts. However, they were able to score a procedural victory when the Supreme Court ruled in 2021 in *City and Mayor of Baltimore* that the U.S. Court of Appeals for the Fourth Circuit erred by not allowing the companies to raise every possible ground for federal removal in their appeal from the district courts.[67] On remand, in 2022, the Fourth Circuit examined every possible ground for federal removal, held that none of them justified removal of the case to federal court, and sent the case to Maryland state court.[68]

The pattern has been the same in similar cases where damage claims were brought in state court and removed to federal court. After the 2021 Supreme Court decision, the U.S. Courts of Appeals for the First,[69] Third,[70] Ninth,[71] and Tenth[72] Circuits in 2022 also examined every possible ground for removal in these cases and decided that none of them justify removal to federal court.

Back in state court, the defendants are expected to file motions to dismiss on a variety of grounds, the major one being federal preemption by the CAA. Although the five 2022 court of appeals cases addressed the issue and dismissed it, another case with a significantly different procedural posture was decided in favor of federal preemption. In a case originally brought in federal court, New York City sued five oil companies for compensatory damages for the past and future costs of climate-proofing its infrastructure and property. The city alleged causes of action for (1) public nuisance, (2) private nuisance, and (3) trespass under New York law based on the defendants' production, promotion, and sale of fossil fuels. In *City of New York v. Chevron Corp.*, the U.S. Court of Appeals for the Second Circuit held in 2021 these claims were displaced by the CAA and upheld dismissal of the case.[73] From the Second Circuit's perspective, this case was more than an action for damages:

> Thus, while the City is not expressly seeking to impose a standard of care or emission restrictions on the Producers, the goal of its lawsuit is perhaps even more ambitious: to effectively impose strict liability for the damages caused by fossil fuel emissions no matter where in the world those emissions were released (or who

[67] BP P.L.C. v. Mayor & City Council of Baltimore, 141 S. Ct. 1532 (2021).
[68] Mayor and City of Baltimore v. BP P.L.C., 31 F.4th 178 (4th Cir. 2022).
[69] Rhode Island v. Shell Oil Products Co., 34 F.4th 44 (1st Cir. 2022).
[70] City of Hoboken v. Chevron Corp., 45 F.4th 699 (3d Cir. 2022).
[71] County of San Mateo v. Chevron Corp., 32 F.4th (9th Cir. 2022).
[72] Bd. of Cty. Comm'rs of Boulder Cty. v. Suncor Energy (USA) Inc., 25 F.4th 1238 (10th Cir. 2022).
[73] City of New York v. Chevron Corp., 993 F.3d 81 (2d Cir. 2021).

> released them). If the Producers want to avoid all liability, then their only solution would be to cease global production altogether.[74]

Because the case was brought in federal court, rather than state court, the court felt it could consider the federal preemption claim on its own terms. In the cases originally brought in state courts, the federal courts considering the removal issue held that "federal preemption does not give rise to a federal question for purposes of removal." That said, all the other lower courts that have considered the preemption issue have either said that it lacked merit or was an issue to be decided in the first instance in state court. Moreover, the Fourth Circuit in *City of Baltimore* explicitly rejected the Second Circuit's preemption analysis as mistakenly based on the doctrine of displacement rather than adhering to the more deferential doctrine of preemption, which presumes that Congress does not intend to preempt state law where there is no conflict with federal law. Indeed, as the Fourth Circuit explained in *City of Baltimore*, the CAA contains two savings provisions that explicitly preserve state common law.[75]

In 2022, the energy companies in *City and Mayor of Baltimore* and at least one other case asked the Supreme Court to hear the case.[76] At the time of this writing, these petitions are pending.

A critical subtext of these cases, as already indicated, is whether something significantly more than a damage remedy is ultimately being sought. The plaintiffs in these cases have argued repeatedly that their lawsuits involve traditional causes of action based on tort, that they are simply seeking to recover the costs they will incur because of the defendants' tortious behavior, and that the damages they seek are not another way of regulating the fossil fuel industry.

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[74] This statement needs to be taken in context. Unlike the other climate liability cases discussed in this section, *City of New Yor*k did not include claims based on deception and failure to warn, which limit the potential damages to defendant's individual conduct. *See infra* note 76 and accompanying text.

[75] In *Int'l Paper Co. v. Ouellette*, 479 U.S. 481 (1987), the Supreme Court held that the identical savings provision in the Clean Water Act must be given effect. The Court ruled that the common law of the state where the polluting was located was not preempted.

[76] BP P.L.C. v. Mayor and City Council of Balt., U.S. S. Ct. No. 22-361, https://www.supremecourt.gov/search.aspx?filename=/docket/docketfiles/html/public/22-361.html. *See also* Chevron Corp., v. San Mateo County, U.S. S. Ct. No. 22-495, https://www.supremecourt.gov/search.aspx?filename=/docket/docketfiles/html/public/22-495.html.

In that vein, a particularly interesting case to watch is *City and County of Honolulu v. Sunoco LP*, in which plaintiffs seek damages against Sunoco and other energy companies for concealment of the dangers of fossil fuels to the climate, and asserting claims for public nuisance, private nuisance, strict liability failure to warn, negligent failure to warn, and trespass. In 2022, after the Supreme Court's removal decision in *City of Baltimore*, the Ninth Circuit ruled that the case should be remanded to state court.[77] The state court judge who drew the case has signaled that he intends to decide whether to allow discovery to commence. That would become the first case to advance beyond the procedural skirmishing stage and move into the trial preparation mode.

Box 4. Damages vs. Injunctive Relief in Climate Cases.

Many of the claims brought by states and municipalities against oil companies seek only compensation in the form of restitution for the damages caused by defendants' allegedly deceitful conduct. They do not seek to directly regulate the companies' operations or reduce their emissions. To be sure, imposition of liability could lead to those results, as it has for other industries like tobacco, asbestos, lead paint, and most recently "forever chemicals" like PFAS.

In other cases, however, states like Minnesota and Massachusetts have sued oil companies alleging violation of state consumer protection laws and seeking injunctions requiring defendants to stop their alleged deceptive advertising and issue public statements to correct their alleged misrepresentations. These cases also demand that defendants disgorge profits gained from the deceptive conduct.

An important feature of this case is the way that the trial court has distinguished the Second Circuit decision in *City of New York*. Defendants in *City and County of Honolulu* argued, as the energy companies have in *City of Baltimore* and the other 2022 removal cases, that the plaintiffs seek to indirectly regulate these companies, not just to obtain damages, and that they are preempted under the CAA.[78] The plaintiffs responded by focusing on the duty of defendants to disclose the climate harms their products cause. As the trial court explained:

> Plaintiffs allege that Defendants had a duty to disclose and not be deceptive about the dangers of fossil fuel emissions, and breached those duties. As the court understands it, Plaintiffs claim Defendants thereby exacerbated the costs to Plaintiffs adapting to and mitigating impacts from climate change and rising sea levels (causation). Finally, Plaintiffs allege harms include flooding, a rising water table, increased damage to critical infrastructure like highways and utilities, and the costs of prevention, mitigation, repair, and abatement—to the extent caused by Defendants' breach of recognized duties. Plaintiffs double-down on this theory of liability by expressly arguing that if Defendants make the disclosures and stop concealing and misrepresenting the harms, *Defendants can sell all the fossil fuels they are able to without incurring any additional liability* (emphasis in original).

[77] City & Cty. of Honolulu v. Sunoco LP, Nos. 21-15313 & No. 21-15318 (9th Cir. July 7, 2022).
[78] City & Cty. of Honolulu and BWS v. Sunoco, LP, Civ. No. 1CCV-20-0000380 (First Circuit Court, State of Hawai'i), Ruling on Defendants' Motion to Dismiss for Failure to State a Claim, (Feb. 22, 2022).

The trial court denied the Defendant's motion to dismiss, rejecting defendants' preemption arguments, and holding that "the Plaintiffs' framing of their claims in this case is more accurate."

b. Apportionment of Damages

One issue in these cases is how to allocate or apportion damages for the costs of climate change, particularly because many actors contribute to GHG emissions. Joint and several liability, which is imposed where apportionment of the damages attributable to multiple actors is not possible, would impose liability for the entirety of damages on even a single actor, or would impose liability on some actors for damages caused by these as well as other actors. Given the magnitude of damages for climate change, we think courts are highly unlikely to do that.[79]

Another option is apportionment of damages based on an actor's contribution to the overall amount of the damage. In other cases, including environmental law cases, courts have used apportionment instead of joint and several liability where there is a reasonable basis for determining the contribution of each actor to a single harm.[80] There are a limited number of GHGs, and the global warming value of each is measurable (and easily comparable with each of the others). Thus apportionment of damages should be possible in an appropriate case without great difficulty.

c. Damages vs. Injunctive Relief

A long-standing question in state common-law cases involving air pollution is whether to grant injunctive relief or damages, and under what circumstances one remedy would be better than the other. That issue was squarely raised in the classic 1970 case of *Boomer v. Atlantic Cement Co.*[81] In that case, neighboring landowners brought a nuisance action against the cement company for injunctive relief and damages, claiming their property had been injured by "dirt, smoke, and vibration" from the plant. Prior to this case, New York law was that a nuisance would be enjoined regardless of the disparity between the economic consequences to the defendant of an injunction and the effect of the nuisance. In this case, the company had invested $45 million in the plant, and employed more than 300 people; the plaintiffs claimed total damages of $185,000. The court refused to apply the long-standing rule granting general injunctive relief, and instead enjoined the nuisance until the company paid the plaintiffs permanent damages. A dissenting judge would have enjoined the pollution discharge unless the company had abated the nuisance in 18 months. The case has inspired considerable commentary on this question,[82] which can be applied not only to conventional air pollution, but also GHG pollution.

VIII. Civil Penalties

Civil penalties are fines prescribed by statute that a court can impose for violation of the statute. Civil penalties are commonplace in environmental law. But they are also available under other laws.

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[79] Michael Burger et al., *The Law and Science of Climate Change Attribution*, 45 COLUM. J. ENV'T L. 1, 210-11 (2020).
[80] Burlington Northern & Santa Fe Ry. Co. v. United States, 556 U.S. 599 (2009); United States v. Chem-Dyne Corp., 572 F. Supp. 802 (S.D. Ohio 1983).
[81] Boomer v. Atlantic Cement Co., 26 N.Y.2d 219 (N.Y. 1970).
[82] *See, e.g.*, Daniel A. Farber, *The Story of* Boomer*: Pollution and the Common Law*, 32 ECOLOGY L.Q. 113 (2005).

Consumer and investor fraud cases brought by states against fossil fuel companies are an example of climate suits brought under state law. Once again, the fact that state law provides a remedy relieves courts of the obligation to fashion one. There are likely to be more such cases in the future.

One of the most prominent consumer fraud cases is *Massachusetts v. Exxon Mobil Corporation*, filed in the state's Superior Court in 2019. In that case, the Massachusetts Attorney General alleges that Exxon has violated and continues to violate the state's consumer protection law by (1) misrepresenting and failing "to disclose material facts regarding systemic climate change risks to Massachusetts investors," (2) deceiving "Massachusetts consumers by misrepresenting the purported environmental benefit of" certain Exxon products and by failing "to disclose the climate change risks posed by its fossil fuel products," and (3) misleading "Massachusetts consumers by conducting 'greenwashing' campaigns."[83] Massachusetts is seeking injunctive relief as well as a civil penalty of $5,000 for each violation.[84] The number of violations Massachusetts can prove will obviously impact the size of the civil penalty. Massachusetts also seeks disgorgement of profits that can be attributable to the misleading statements. A trial is to take place after discovery is complete.[85]

IX. Accounting

Public trust law is built to no small degree on the foundation of traditional private and charitable trust law. Thus, when specific traditional trust law principles are consistent with the language and purposes of public trust laws, these principles have been imported into public trust law.[86] One basic trustee obligation is to keep detailed and accurate accounts on the type and amount of trust property, and on the trustee's administration of that property. A second obligation of trustees under private and charitable trust law is to report to the beneficiaries at their request complete and accurate information concerning trust property. Essentially, this obligation ensures that basic information developed about the status of the trust corpus is available to beneficiaries on a regular basis. A third obligation of trustees under traditional trust law is to permit third parties to examine the accounts and all relevant documents to ensure the accuracy and completeness of these accounts. This auditing mechanism helps prevent and correct both errors and fraud, and thus enhances the likelihood of adherence to the trustee's basic duties.[87]

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[83] Massachusetts v. Exxon Corp., Civil No. 19-3333-BLSI, slip op. at 6 (Mass. Superior Ct. Mar. 21, 2022) (memorandum and order on motion to strike certain defenses).

[84] These remedies are authorized by MASS. GEN. LAWS ch. 93A, §4.

[85] In 2022, Exxon Mobil lost an effort to block the litigation. SLAPP (strategic lawsuit against public participation) suits are brought to intimidate or silence critics by burdening them with legal and other costs. Massachusetts has an anti-SLAPP law that provides a mechanism for dismissing such suits. Exxon invoked the state's anti-SLAPP statute in this case, claiming that the state was trying to censor its views, but the court ruled unanimously the state's anti-SLAPP statute did not apply to actions brought by the attorney general. Commonwealth v. Exxon Mobil Corp., __ N.E.3d __, 2022 WL 1633866 (Mass. May 24, 2022). *See also* Exxon Mobil Corp. v. Healy, __F.3d __ (2d Cir. 2022) (upholding district court's dismissal of claims that Massachusetts and New York investigations violated company's right to free speech); Exxon Mobil Corp. v. Attorney General, 94 N.E.3d 786 (Mass. 2018) (upholding state's legal authority to conduct investigation that led to litigation).

[86] John C. Dernbach, *The Role of Trust Law Principles in Defining Public Trust Duties for Natural Resources,* 54 U. MICH. J.L. REFORM 77 (2020).

[87] John C. Dernbach, *Taking the Pennsylvania Constitution Seriously When It Protects the Environment: Part II—Environmental Rights and Public Trust*, 104 DICK. L. REV. 97, 161-64 (1999).

A unique and important trust law remedy—an accounting—derives from these obligations.[88] In trust law, a beneficiary has standing to bring a petition for accounting to a court of equity. In the Alaska and Montana cases described above, plaintiffs sought or are seeking an accounting of the state's GHG emissions, based on public trust law in those states. A court that decides a state's public trust law applies to climate change would also need to decide that an accounting is an available remedy under that's state's law. Such a remedy could protect public trust resources, including the climate system, by requiring public disclosure of the status of those resources. That, in turn, would draw public attention to the state's GHG emissions; it could even be designed to require public disclosure of what the state is doing to protect those resources. Importantly, though, it would not require extensive judicial supervision or judicial decisionmaking about what policy choices are best to reduce GHG emissions.

The Alaska Supreme Court considered the requested accounting as part of a set of broader declarative remedies that were requested, and denied it, probably because of its association with those broader remedies. A proposed accounting remedy is still in front of the Montana trial court.

X. Award of Costs and Attorney Fees

Like injunctive relief, this remedy also comes into play under a great variety of causes of action. Litigation costs are a significant deterrent to public interest lawsuits seeking climate change remedies. Under the "American rule," each side bears its own costs.[89] There is a limited number of public interest lawyers and private lawyers willing to undertake these cases pro bono. The same is generally true of expert witnesses required in complex litigation. Many federal environmental and natural resource laws contain fee-shifting provisions within their citizen suit provisions authorizing courts to award costs and attorney fees to prevailing parties.[90] Additionally, the Equal Access to Justice Act (EAJA) provides fee recovery in suits against federal agencies unless the court finds that the agency's position was "substantially justified or that special circumstances make an award unjust."[91] EAJA fee recovery is particularly important in NEPA cases because the underlying statute lacks a fee-shifting provision.

XI. Conclusion

Litigants and courts are capable of crafting remedies to address GHG emissions and climate change adaptation without getting bogged down in judicial management and enforcement issues. We have surveyed the wide range of these remedies in this paper. The most creative and effective judicial remedies are yet to come.

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[88] *See generally* DOBBS & ROBERTS, *supra* 24, §4.3(5) (3d ed. 2018).
[89] *See* Alyeska Pipeline Serv. Co. v. Wilderness Soc'y, 421 U.S. 240 (1975).
[90] *See, e.g.*, 33 U.S.C. §1365 (Clean Water Act); 42 U.S.C. §7604 (Clean Air Act); 16 U.S.C. §1540 (Endangered Species Act).
[91] 28 U.S.C. §2412.