**DRAFT**

ATMOSPHERIC RECOVERY LITIGATION AROUND THE WORLD:

GAINING NATURAL RESOURCE DAMAGES AGAINST CARBON MAJORS TO FUND A SKY CLEANUP FOR CLIMATE RESTORATION[[1]](#footnote-1)

***In this planetary climate emergency, the level of our ambition must match the scale of the threat*.**

1. **INTRODUCTION**

Stabilizing the planet’s climate system requires a full transition off of carbon intensive fossil fuels by at least midcentury and perhaps much sooner. But as ambitious as that is, decarbonization alone is not sufficient. The global mean temperature rise of almost one degree Centigrade is the result of excess carbon emissions already flooding the atmosphere, due to roughly 150 years of industrial-scale greenhouse gas emissions. Scientists emphasize the importance of drawing down and sequestering 150 gigatons of “legacy” carbon -- in essence, accomplishing a cleanup of the sky.[[2]](#footnote-2)

Scientists have developed a suite of methods, known as “natural climate solutions” (NCS) holding tremendous potential to draw down and absorb carbon in the soil through: 1) reforestation; 2) conservation agricultural methods (such as no-till, non-chemical, and use of cover crops); 3) mangrove and wetlands restoration; and 4) regenerative grazing practices.[[3]](#footnote-3)Deploying these projects at scale would engage farmers, foresters, ranchers, and native communities, and would also boost adaptation efforts by harnessing nature’s own capacity to produce food, mitigate floods, and filter water. Beyond being essential to climate system recovery, such ecosystem restoration is vital as a response to the global biodiversity loss crisis.[[4]](#footnote-4) But the magnitude of restoration is daunting, requiring the recruitment of nearly all available and suitable land across the world, and requires massive funding. In a functional political world, national leaders around the globe would convene to create an organized and funded framework for global carbon drawdown. But in a present leadership vacuum, those most responsible for creating this crisis -- fossil fuel companies -- have yet to be forced to pay a dime for cleaning up the atmosphere.

This chapter presents a meta-strategy for jump-starting the drawdown effort across the globe. It suggests a global campaign of Atmospheric Recovery Litigation (ARL) to hold fossil fuel companies liable for atmospheric natural resource damages (NRDs) to fund projects sequestering carbon in the soil. The legal framework looks to the same principles that hold companies responsible for cleaning up marine oil spills. While the U.S. federal government will likely not lead a cleanup effort for the atmosphere, other sovereigns – states, tribes, counties, and foreign nations - are positioned to do so. By setting forth a unifying liability framework, this chapter aims to catalyze a global effort that is uniquely localized yet unified in resolve. The ARL strategy is designed to parallel and compliment the decentralized litigation strategy known as Atmospheric Trust Litigation (ATL), described below, currently proceeding apace to force the other climate imperative, decarbonization.

1. **BACKGROUND**

Together, the ATL and ARL litigation campaigns represent converging litigation aimed at restoring climate stability by addressing both sides of the climate imperative: decarbonization and drawdown, respectively. Both campaigns rest on the ancient public trust principle, which obligates and empowers government to protect and restore crucial ecological assets such as the atmosphere. ATL, spearheaded by the non-profit organization Our Children’s Trust, consists of cases brought on behalf of youth against their governments seeking judicial remedies to require agencies to accomplish necessary emissions reduction. The most well-known case, *Juliana v. United States* -- often called “the biggest lawsuit on the planet” -- was brought on behalf of 21 youth against the U.S. federal government in 2015. In an early sweeping victory for plaintiffs, the federal district court declared public trust rights and constitutional due process rights to a balanced climate system.[[5]](#footnote-5) The case presently sits in the Ninth Circuit on appeal.

Atmospheric Recovery Litigation (ARL) rests on the same public trust principle but is geared towards the other side of the climate imperative: drawdown of massive amounts of CO2. This litigation, having a different objective, also involves different parties. In ARL, sovereign co-trustees – states, counties, tribes, and/or foreign nations (and federal U.S. agencies if inclined) -- will seek natural resource damages from fossil fuel industry defendants to fund cleanup of the atmosphere. By depleting the assets of “carbon majors,” such litigation would secondarily stimulate a wind-down of this deadly industry, forcing a transition to clean renewable energy and contributing to the decarbonization side of the climate imperative.

1. **THE PUBLIC TRUST PRINCIPLE**

The public trust principle is fundamental and ancient, reaching to far greater depths than any statute.[[6]](#footnote-6) Manifest in many countries throughout the world, it designates government as trustee of public resources, including the waters, shorelines, fisheries, wildlife, and, logically, air and atmosphere. As trustee, government must protect this vital ecological endowment for the continued survival and benefit of future generations. Government may not irrevocably convey these resources to private parties or allow their substantial impairment. Such obligations trace back to public rights announced in Roman law and are repeatedly recognized by modern courts.

As several decisions have now elaborated, the public trust emanates from the “inherent and indefeasible” rights retained by the citizens when entering into a social compact forming government.[[7]](#footnote-7) With constitutional force, the trust operates both as a restraint on government, disallowing substantial impairment to trust resources, and an affirmative obligation to protect those resources. Two ATL cases establish bedrock principles grounding the atmospheric NRD actions contemplated by this chapter. In *Juliana v. United States*, the U.S. District Court of Oregon found a federal public trust doctrine enforceable though the constitution’ due process clause and held that the federal government must protect a “climate system capable of sustaining human life.”[[8]](#footnote-8) Similarly, *Foster v. Wash. Dep’t of Ecology* explicitly found an atmospheric trust constitutionally compelling government to restore a healthy climate system.[[9]](#footnote-9)

The same public trust framework should hold major fossil fuel corporations liable for funding atmospheric recovery. Traditionally, polluters remain liable for natural resource damages to public trust assets. Sovereign trustees are obligated to seek recovery of such natural resource damages and apply them towards restoration of the resource. Although the scale of ecological recovery needed to stabilize the climate system is unprecedented, nevertheless the basic legal paradigm is no different than the principle’s regular application to more discrete contexts, such as an oil spill in marine waters.

1. **ATMOSPHERIC NRDS**

It is important to distinguish atmospheric natural resource damages from other categories of climate losses and damages, because there is simply not enough money in the world to pay for all of the harm unleashed by the fossil fuel industry. Its carbon dioxide pollution creates at least six categories of world-wide harm: 1) death and injury; 2) property loss; 3) economic loss; 4) community relocation expense; 5) community adaptation expense; and 6) atmospheric and other ecological damage. Compensating for losses in the first five categories, though unquestionably compelling in human terms, achieves nothing in terms of climate system recovery. Moreover, all five categories of damage will only worsen as the climate system spins out of control. Atmospheric NRDs are geared towards actually fixing the crisis that the industry has created. Successful atmospheric NRD lawsuits will secure funding to remove CO2 from the atmosphere and sequester carbon in vegetation and soil.[[10]](#footnote-10)

 Having the singular purpose of *cleaning up* the atmosphere of historic excess carbon dioxide, projects funded through atmospheric NRDs may not be used to “offset” further pollution. “Offsets” are controversial regulatory tools used to legalize continued greenhouse gas pollution as long as the polluter buys some sort of carbon sequestration project (such as forest conservation) to “offset” that pollution. The same sequestration projects can be used either as offsets or measures or to clean up the sky, but it is vital to differentiate the two. Offset programs remain fatally misguided, because they simply legalize continued pollution without making any dent in the legacy pollution that continues destabilize the climate system. Moreover, offsets can monopolize key lands capable of sequestering carbon dioxide, thus competing with the sky cleanup.

1. **SCALING AND PROLIFERATING THE SKY CLEANUP EFFORT THROUGH NATURAL CLIMATE SOLUTIONS**

In 2017, a seminal scientific paper announced the potential to remove vast amounts of CO2 though Natural Climate Solutions (NCS).[[11]](#footnote-11) The scientific community has further refined these into more localized, practical prescriptions. A global atmospheric cleanup using NCS requires substantially “scaling up” the present effort, which consists largely of scattered projects providing pilot experience. Scientists have mapped many areas of the globe to depict carbon sequestration potential, so sovereigns can plan and execute NCS drawdown programs across their jurisdictions. Successful NRD lawsuits can unlock that potential by funding broad-scale restoration.

 The backdrop to any atmospheric NRD lawsuit should be a regional plan setting forth a framework from which to organize drawdown projects. Scientists and professionals are positioned to design a plan that matches the sequestration capacity of a region with the resources, needs, and incentives of the local communities undertaking restoration. The plan is essential to bring the sky cleanup effort to a tangible level that courts will understand. It must clearly explain the Earth’s carbon cycle, identify the “engines” of sky cleanup as land-based methods, and delineate the restoration potential of the particular sovereign(s) suing for natural resource damages.

1. **ANALOGOUS LITIGATION HOLDING CORPORATIONS LIABLE FOR POLLUTION**

Natural resource damage actions (not involving climate harm) are characteristically brought pursuant to statutes expressly allowing recovery of restoration costs resulting from the release of “hazardous substances” to the environment, or oil releases into waterways. Because there is yet no federal law expressly providing atmospheric NRDs for damage from fossil fuel pollution, the Atmospheric Recovery Litigation approach must assemble common law principles (or general statutory provisions) to create a liability framework. This chapter suggests the public trust as a basis for NRD claims immediately available to government trustees. In constructing a liability framework, it will be useful to draw principles from three analogous areas of litigation in which sovereign or municipal plaintiffs have sued major producers or emitters under primarily common law for environmental damage.[[12]](#footnote-12) The cases, advancing in both federal and state courts, reveal both opportunities and pitfalls for atmospheric NRD litigation. Summarized briefly here, their principles are discussed in more detail below.

1. **THE MTBE LAWSUITS**

One category of cases involves suits by municipal and state governments against major gasoline producers for groundwater contamination resulting from the chemical MTBE, used as an additive by petroleum companies decades ago to reduce octane levels in gasoline. Due to its chemical properties, spilled MTBE spreads easily into groundwater supplies. These cases form a highly instructive body of caselaw because they represent, in effect, natural resource damage actions without being so explicitly named. Several have met with success.

 In New Hampshire, a jury held ExxonMobil liable for $236 million to fund groundwater cleanup.[[13]](#footnote-13) In another case, the City of New York won a $104 million judgment against ExxonMobil for groundwater contamination.[[14]](#footnote-14) Beyond court awards, plaintiff attorneys have gained huge settlements against producer corporations for MTBE contamination.[[15]](#footnote-15) While early lawsuits did not expressly assert the sovereigns’ public trust authority, two recent suits do.[[16]](#footnote-16)

The MBTE body of caselaw remains highly complex and is still evolving. While these cases use a variety of liability theories sounding in tort, they signal a willingness of many courts to hold producers responsible for contamination of a vital public resource. These cases may provide important analysis for use in climate litigation against the Carbon Majors to clean up the atmosphere.

**B. THE MONSANTO PCB SUITS**

At least fifteen lawsuits have been brought by government entities against Monsanto Corporation for ecological harm resulting from its manufacture of PCBs, highly toxic substances appearing in waters, sediments, fish, wildlife, and other natural resources.[[17]](#footnote-17) These suits generally seek damages to fund cleanup. Like the MTBE suits, these are predicated on Monsanto’s liability as a producer of the toxin. The claims range widely from general statutory claims to state common law claims such as those relating to public nuisance, negligence, trespass, defective products, and others. Like the MTBE suits, these are generally not called natural resource damage recovery actions, but the public trust frame has provided prominent grounding for some of the lawsuits. Complaints filed by the states of Oregon, Washington, and Ohio, for example, expressly assert public trust authority to sue polluters and recover damages to state public trust resources.[[18]](#footnote-18) This vast and quickly evolving field has produced several early procedural victories.[[19]](#footnote-19) In Washington, the federal district court rejected a motion to dismiss, allowing the City of Seattle’s public nuisance, product liability, and nuisance claims to proceed.[[20]](#footnote-20) The court found that the claims were not time-barred under a state statute (as private claims would be), because they were carrying out the state’s public trust duty to protect waters.[[21]](#footnote-21) In Oregon, where the State framed the lawsuit predominantly as one to recover damages to clean up public trust assets, the court rejected defendant’s motion to dismiss in part, allowing claims for public nuisance and trespass to public trust resources to proceed.[[22]](#footnote-22) In Ohio, a court allowed several claims, including the public trust claim, to proceed.[[23]](#footnote-23) Motions to dismiss have failed in several other cases as well.[[24]](#footnote-24)

1. **THE CLIMATE LIABILITY DAMAGES SUITS**

The third relevant category includes suits by cities, counties, and one state against large corporate producers of fossil fuels seeking damages for adaptation or relocation costs. These suits represent the second round of climate lawsuits against the fossil fuel industry. The first group primarily asserted federal common law nuisance claims, an avenue that was rejected by the U.S. Supreme Court in *American Electric Power (AEP) v. Connecticut*,on grounds that the federal Clean Air Act displaced such claims.[[25]](#footnote-25) The first-generation cases ended without relief, either in the form of injunctive remedies or damages.

The second-generation cases, now numbering over a dozen, were initiated in 2017 against fossil fuel producers. They seek “disgorgement of profits,” or damages in unstated amounts, from the fossil fuel defendants to fund various municipal adaptation measures, such as replacement of infrastructure and construction of sea walls to hold back sea level rise.[[26]](#footnote-26) Carefully crafted to avoid the *AEP* displacement analysis that defeated the first-generation suits, these cases assert state (not federal) common law claims. All have a centerpiece public nuisance claim, and several present additional claims sounding in product liability and negligence. They cast a broad moral indictment of the fossil fuel industry by presenting jaw-dropping factual characterizations of what the companies knew would be the damage likely set in motion by their continued fossil fuel production. Nevertheless, federal courts have dismissed two key cases on grounds of displacement and political question; both are on appeal.[[27]](#footnote-27) As Katrina Kuh observes in her summary of the field, “So far, the second-generation common law nuisance suits are struggling, as their predecessors did, to convince courts to open their doors to the merits of their claims.”[[28]](#footnote-28)

The atmospheric natural resource damage action presented in this chapter must be clearly distinguished from these second-generation climate liability suits. Though both seek damages, they remain fundamentally different in purpose. The second-generation climate suits aim to fund adaptation, compensating sovereigns for the costs of responding to climate disruption. This purpose carries two drawbacks. First, it conjures a fundamental equity problem. Climate harms now pummel every corner of the world, saddling virtually all communities with soaring costs. The fossil fuel industry -- even despite its vast holdings -- will not be able to pay for all of the damage it has unleashed onto the world. If these American lawsuits win, they will drain the bank for the benefit of a few municipal litigants who positioned themselves first in line in the court system, leaving the great bulk of communities with no compensation. Second, the remedy does nothing to solve the climate crisis, because it does not put a dime into cleaning up the atmosphere. Until excess carbon is removed from the atmosphere, the climate emergency will continue to intensify until it brings universal chaos and community collapse world-wide. Any conceivable adaptation measures will be for naught in a scenario of runaway heating.

Atmospheric NRD suits seek to restore the climate system by cleaning up excess carbon dioxide in the sky. As explained below, nearly every sovereign is positioned to sue for clean-up costs to fund drawdown projects in its jurisdiction. While any one sovereign can achieve only a fractional share of the total sky cleanup, virtually every successful project contributes to the overall goal. Thus, a win for any NRD suit may represent a win for all jurisdictions across the globe, in contrast to the second-generation climate adaptation lawsuits, which allow a few winners at best and leave the rest behind. If those suits prevail in their remedy seeking “disgorgement of profits,” there will be no financial coffers available from the fossil fuel industry to fund sky cleanup. Nevertheless, such suits have contributed greatly to the ultimate goal of sky cleanup by amassing crucial evidence of industry culpability and crafting legal approaches to industry liability.

1. **THE PUBLIC TRUST ATMOSPHERIC RECOVERY LITIGATION FRAMEWORK**

The atmospheric recovery lawsuit presents a common-law analogue to a lawsuit seeking recovery of natural resource damages in the wake of an oil spill in waters. The discussion below does not purport to resolve or even identify every procedural impediment that may arise in such an effort, but rather frames an approach. Litigators must navigate specific rules and doctrines applicable in their jurisdiction.

1. **THE ATMOSHERE AS A *RES***

It is only logical that atmospheric pollution can be the subject of a common law NRD claim. Air has been considered a public asset since Roman times and remains a resource crucial to the survival of life on Earth.[[29]](#footnote-29) Roman law classified air—along with water, wildlife and the sea—as *res communes*,[[30]](#footnote-30) and many courts have emphasized Roman law as the origin of the public property rights underlying the trust principle.[[31]](#footnote-31) In *Georgia v. Tennessee Copper Co.*, the Supreme Court essentially proclaimed air as the people’s sovereign property, declaring: “[T]he state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain.”[[32]](#footnote-32)While courts historically characterized the scope of the trust as encompassing water resources and wildlife (likely focusing on those because they were frequently litigated), modern courts have made clear the trust’s application to a broader array of natural resources crucial to society.[[33]](#footnote-33) Courts emphasize that this doctrine is not “fixed or static,” but instead “‘molded and extended to meet changing conditions and needs of the public it was created to benefit.’”[[34]](#footnote-34) Several courts and commentators now include air and atmosphere within the ambit of public trust protection, and numerous constitutions and statutes in the United States do the same*.*[[35]](#footnote-35)

Judges in two notable ATL climate cases have extended public trust to protection to the atmosphere and climate system. As the court in *Foster v. Dep’t of Ecology* recognized, the atmosphere is inextricably connected to submerged lands, which are traditionally and unequivocally subject to the trust (“. . . to argue that GHG emissions do not affect navigable waters is nonsensical. . .”).[[36]](#footnote-36) The *Juliana* court adopted the same reasoning when it held that atmospheric protection remains crucial to sustaining ocean and shoreline trust resources.[[37]](#footnote-37)

But despite the essential role of air and atmosphere, scant litigation has sought to recover NRDs for air pollution. The obvious reason is because air pollution (unlike an oil spill) quickly dissipates from the immediate area of impact, obviating clean-up.[[38]](#footnote-38) *Atmospheric* GHG pollution, however, presents a different matter. The atmosphere accumulates GHGs, showing increasing concentrations that are precisely monitored.[[39]](#footnote-39) The excess of atmospheric CO2 (beyond pre-Industrial levels) requiring drawdown is about 150 GtC.[[40]](#footnote-40) Carbon dioxide pollution to the global atmosphere is measurable, just as oil spilled in marine waters is measurable.

1. **THE SOVEREIGN CO-TRUSTEES**

Because the atmosphere is a global resource, there is not one trustee, but rather multiple co-trustees bearing responsibility to protect the ecological asset. All national, subnational, state, and tribal sovereigns effectively share this non-divisible global asset, so any trustee, in theory, has standing to sue for damage to the atmosphere.[[41]](#footnote-41) The United Nations Framework Convention on Climate Change (UNFCC)—entered into in 1992 by most countries of the world—recognizes nations as co-trustees by stating a common duty to protect the atmosphere for future generations and to prevent “dangerous anthropogenic interference with the climate system.”[[42]](#footnote-42) Subnational sovereigns—such as states in the United States—are recognized as public trustees of ecological assets. American Indian tribes are also recognized as trustees of shared natural resources, expressly designated as such under environmental statutes.

1. **THE CLIMATE LIABLE PARTIES (CLPs)**

Every single person on Earth pollutes the atmosphere. However, large classes of industrial actors have profited enormously from producing fossil fuels even in spite of longstanding knowledge that doing so imperils the planet’s climate system and human survival. Because the major corporate fossil fuel producers hold immense assets and bear culpability for the climate crisis, Atmospheric Recovery Litigation targets the fossil fuel producers to pay for cleanup of the atmosphere. The climate adaptation cases already assert producer liability, similar to the focus of the PCB and MTBE cases. All three contexts require courts to push liability further up the chain of commerce from the actual parties that emit or dispose of the dangerous substances. Not surprisingly, the task of identifying liable parties intersects directly with causation issues (explored below).

A groundbreaking report released in 2014 blazed a trail leading to producer liability in the climate context.[[43]](#footnote-43) The research team used production and supply records to correlate GHG emissions to specific companies (and predecessors) producing oil, gas, and coal, dating back to the beginning of the Industrial Revolution. The report found that nearly two-thirds of GHG emissions generated since the beginning of the industrial age could be attributed to just 90 companies (dubbed the Carbon Majors).[[44]](#footnote-44) This research has provided the platform for the ongoing climate adaptation liability suits against major producers such as Exxon, Chevron, BP, Shell, and others.

Producer liability is fast gaining ground as a result of all three categories of analogous litigation described above. Though the second-generation climate liability suits have not yet gained a liability judgment against the carbon majors, neither has there been a decision finally absolving them of liability. The two notable dismissals so far (by federal Judge Alsup of California and federal Judge Keenan of New York) have focused more on separation of powers issues than producer liability.[[45]](#footnote-45) A recent ruling by Rhode Island federal district Judge William Smith, remanding a suit back to state court, underscored the logic of holding producers liable. The court summarized the case in this way:

Climate change is expensive, and the State wants help paying for it. Specifically from Defendants in this case, who together have extracted, advertised, and sold a substantial percentage of the fossil fuels burned globally since the 1960s. This activity has released an immense amount of greenhouse gas into the Earth’s atmosphere, changing its climate and leading to all kinds of displacement, death (extinctions, even), and destruction. What is more, Defendants understood the consequences of their activity decades ago, when transitioning from fossil fuels to renewable sources of energy would have saved a world of trouble. But instead of sounding the alarm, Defendants went out of their way to becloud the emerging scientific consensus and further delay changes — however existentially necessary — that would in any way interfere with their multi- billion-dollar profits. All while quietly readying their capital for the coming fallout.[[46]](#footnote-46)

In the other two categories of analogous litigation, the law is proceeding apace to hold producers liable. At least eight of the notable PCB suits against Monsanto have survived motions to dismiss.[[47]](#footnote-47) In *San Jose v. Monsanto*, a federal judge ruled that Monsanto may be liable for public nuisance when it failed to provide adequate instructions on how to dispose of PCBs properly.[[48]](#footnote-48) In *Seattle v. Monsanto*, the court refused to grant defendant’s motion to dismiss, finding, “Seattle has sufficiently alleged that Monsanto produced and marketed certain toxic chemicals that now contaminate Seattle’s streets, drainage systems, and [waterways].”[[49]](#footnote-49) In *Oregon v. Monsanto*, the court squarely rejected Monsanto’s position that a manufacturer could not be liable for trespass claims, stating, “Defendants cite no authority for the proposition that the general elements of trespass do not apply to a party whose relevant actions were in the context of manufacturing a product and/or placing that product into a stream of commerce.”[[50]](#footnote-50)

Similarly, in the MBTE context, several (though not all) cases have established producer liability for environmental contamination. In the Second Circuit’s opinion in *In re MTBE Products Liability Litigation*, the court affirmed a jury’s finding that ExxonMobil was liable for groundwater contamination based on theories of trespass, public nuisance, negligence, and failure to warn.[[51]](#footnote-51) While Exxon argued that its actions as a “‘mere refiner and supplier’ of gasoline were ‘too remote from any actual spills or leaks,’” the court found Exxon liable because the corporation knew that the gasoline it sold would be spilled.[[52]](#footnote-52) In both the PCB and MTBE cases, a common thread is producer knowledge regarding the effects of the product in question. The ongoing climate adaptation liability cases provide a robust evidentiary platform alleging producer knowledge of the harmful effects of fossil fuel emissions on the climate system.

1. **THE CLAIMS**

The claims in an atmospheric NRD suit may be quite varied, and this discussion only generally maps the terrain. The driving concept is simply that responsible industry parties should pay for the carbon release in the sky, just as they would be forced to pay for cleaning up a spill of oil or toxins in a waterway. In the water pollution context, sovereign trustees readily invoke statutory authority (such as the Oil Pollution Act and CERCLA) to seek natural resource damages. There is no such obvious statutory scheme for cleaning up the sky,[[53]](#footnote-53) but common law claims and generic statutes exist as a basis for such litigation. CERCLA, in fact, was premised on the public trust doctrine’s fiduciary duty to seek damages from third parties to restore a polluted trust asset.[[54]](#footnote-54) Commentators have long urged government trustees to assert claims premised on the public trust and/or nuisance law to seek natural resource damages either in concert with statutory claims or independent of such claims.[[55]](#footnote-55)

The discussion below illuminates two possibilities. The first is a stand-alone public trust claim. The second is a public nuisance and/or trespass claim seeking relief for interference with public trust property. This common law claim might be accompanied by other tort claims relevant to the situation (such as negligence, defective product, and manufacturer’s failure to warn). The three categories of relevant and analogous litigation highlighted above (the PCB, MTBE, and climate adaptation litigation) assert some or all of these common law claims in various cases. And of course, while not discussed below, sovereigns may have generic statutes or may pass climate-specific legislation allowing recovery of atmospheric NRDs.

**1.** **PUBLIC TRUST CLAIM**

A straightforward public trust claim should support recovery of natural resource damages. Where third parties have harmed trust assets, the trustee has the affirmative duty to recoup monetary damages to restore such assets. The duty remains a classic obligation in the private sphere, and it is well-established in the sovereign context as well. In an extensive article on the subject, Allen Kanner asserts: “[U]nder the public trust doctrine, a state AG [attorney general] can sue, as trustee, for damages to natural resources that are held in the public trust.”[[56]](#footnote-56) In his leading treatise on environmental law, Professor William Rodgers explains that the public trust “can be invoked offensively by the government as in a suit to collect damages to trust property.”[[57]](#footnote-57) Another commentator observes that case law “clearly affirm[s] that a state, as trustee for certain natural resources, has the power to recover damages for injuries to these natural resources” and that the public trust doctrine “supplies the state with a cause of action in natural resource damage cases.”[[58]](#footnote-58) The public trust, where recognized, may provide a basis for atmospheric NRD actions outside of the U.S. as well.

American courts have established the authority to recover NRDs as a matter of both state and federal common law.[[59]](#footnote-59) In *State v. Gillette*, the Washington Court of Appeals ruled that the State Department of Fisheries was entitled to recover NRDs for loss of fisheries habitat even absent a statutory provision allowing recovery, explaining, “[T]he state, through the Department, has the fiduciary obligation of any trustee to seek damages for injury to the object of its trust.”[[60]](#footnote-60) In *In Re Steuart Transportation Co.*,[[61]](#footnote-61) a federal district court held that the federal government and the state of Virginia could recover under the public trust doctrine for the loss of migratory waterfowl resulting from an oil spill, absent any statutory basis.[[62]](#footnote-62) In Maryland, the federal district court imposed common law (pre-statutory) liability for a tanker’s release of oil, stating, [I]f the State is deemed to be the trustee of the waters, then, as trustee, the State must be empowered to bring suit to protect the corpus of the trust -- i.e., the waters -- for the beneficiaries of the trust -- i.e., the public.”[[63]](#footnote-63) And in *State v. City of Bowling Green*, the Ohio Supreme Court found a municipality potentially liable under the PTD for a fish-kill caused by its negligent discharge of sewage, reasoning:

An action against those whose conduct damages or destroys [trust] property, which is a natural resource of the public, must be considered an essential part of a trust doctrine, the vitality of which must be extended to meet the changing societal needs.[[64]](#footnote-64)

In the PCB litigation, at least one state has invoked the PTD as a stand-alone cause of action against Monsanto. Ohio’s first cause of action asserted, “Ohio, in its capacity as trustee over its public natural resources, has suffered and continues to suffer monetary losses in amounts to be proven at trial.”[[65]](#footnote-65) Monsanto filed a motion to dismiss claiming that the PTD could not form the basis of a stand-alone claim. Denying the motion and deferring the final decision for a later time, the court said, “The public trust doctrine, however, may yet prove to stand as its own cause of action as society's needs change.”[[66]](#footnote-66)

In MTBE litigation, the State of Rhode Island case against industry defendants included a stand-alone public trust claim asserting “impairment of public trust natural resources.” While the claim was dismissed, the federal court seemingly did not question the state’s ability to assert such a claim but rather found that public trust law of the state had not yet been extended to groundwater.[[67]](#footnote-67) The court left open the possibility that the state could extend the PTD to include groundwater in the future through legislation or decisional law. Moreover, the court allowed other claims to go forward, including a trespass claim that was premised largely on the state’s *parens patriae* interest (closely related to the public trust) in its natural resources.[[68]](#footnote-68) In another MTBE case, the Supreme Court of New Hampshire clearly indicated the viability of a public trust claim (thought the state plaintiff did not fashion one), in the context of groundwater contamination, stating:

The doctrine allows a state attorney general, as trustee, to bring a cause of action for damages to natural resources held in trust by the State. To bring a successful claim, the State must prove an unreasonable interference with the use and enjoyment of trust rights. *. . .* [T]he public trust doctrine is its own cause of action. . . . [[69]](#footnote-69)

Of the second-generation climate cases, one brought by Rhode Island included a stand-alone public trust claim premised on the state’s constitution, asserting damages necessary to “restore injuries to public trust resources.”[[70]](#footnote-70) The requested relief, however, does not aim to restore climate stability but rather seemingly ties to infrastructure damages and restoration of localized natural resources. The case has been remanded from federal court back to state court with no disposition of the claim yet.[[71]](#footnote-71) And in a new area of litigation seeking natural resource damages for cleanup of the chemical PFAS, a complaint by the State of Vermont asserts a stand-alone public trust law cause of action for natural resource damages.[[72]](#footnote-72)

**2. NUISANCE, TRESPASS, AND OTHER COMMON LAW CLAIMS**

State tort law provides another set of possible claims. Notably, all three categories of analogous litigation (PCB, MTBE, and climate liability cases) assert state public nuisance claims, and many include trespass, negligence, and product liability claims as well. The public nuisance claims warrant special description. Generally speaking, the law of public nuisance casts a wide net, covering "an unreasonable interference with the rights common to the general public."[[73]](#footnote-73)  Extending far beyond public property rights in ecology, nuisance claims can reach to matters of public health, safety, morals, and public peace, addressing even tobacco sales and opioid addiction.[[74]](#footnote-74)  But invoked in the PCB and MTBE cases, the claim narrows to a clear public property interest in trust resources (such as groundwater in the MTBE cases, and a broader array of natural resources in the PCB cases) and presents something of a hybrid public trust/public nuisance claim quite distinct from social nuisance claims.[[75]](#footnote-75) Government lawyers may ground their cases in nuisance to present something recognizable and conventional to courts that may be unfamiliar with the public trust.

Both the PCB and MTBE litigation shows some notable success where hybrid public trust/public nuisance claims have been implicitly or explicitly tied to the sovereign’s trust duty to restore the natural resources damaged by the toxic pollution.[[76]](#footnote-76) An early victory resulted in *Oregon v. Monsanto*, where the state asserted a *per se* nuisance claim explicitly tied to its public trust responsibility, claiming, “The continuous presence of PCBs on lands and in rivers, waterways, and lakes that [the state] owns or holds in trust for the benefit of the public constitutes a *per se* public nuisance.” Rejecting Monsanto’s motion to dismiss, the trial judge found not only a viable *per se* nuisance claim (citing a state statute prohibiting the pollution of state waters), but also found all elements of a common law public nuisance claim satisfied.[[77]](#footnote-77) Likewise, in a PCB case brought by the City of Seattle, a federal district court judge rejected defendant’s motion to dismiss a public nuisance claim.[[78]](#footnote-78) Though the complaint failed to mention the public trust, the court framed Seattle’s claims in public trust terms, stating,

In this action to restore the purity of its waterways, Seattle acts in its sovereign capacity. . . . This authority derives from the state’s duty to hold all navigable waters within the state in trust for the public. . . . Harm to the environment from the continued production, marketing, and routine use of PCBs was thus foreseeable to Monsanto, giving rise to a duty to avoid that harm.[[79]](#footnote-79)

In Washington v. Monsanto, the State invoked its role as public trustee to frame its nuisance claims and remedy seeking cleanup costs for PCBs, stating: “The injury to public natural resources is especially injurious to the state in its proprietary and natural resource trustee capacities.”[[80]](#footnote-80) The case, removed to federal court and then remanded back to state court, has no dispositive orders yet, but should prove enlightening to lawyers considering atmospheric NRD litigation.

 In the MTBE context, public nuisance and/or other common law claims (primarily negligence and product liability) have supported both large court awards and settlements. In a Rhode Island case brought by the state against MTBE producers, the court upheld the state’s public nuisance claim, declaring: “Widespread water pollution is indeed a quintessential public nuisance.[[81]](#footnote-81) But because these claims are premised on state laws, results differ between states. A Pennsylvania court dismissed a similar public nuisance claim, because the law of that state limits liability to owners or operators of the site upon which the offending release occurs.[[82]](#footnote-82) Though the common law claims asserted in early MTBE cases usually failed to mention the public trust,[[83]](#footnote-83) their aim was decidedly a public trust objective of cleaning up public groundwater sources. The stunning success of some cases signal a willingness of many (though not all) courts to hold producers responsible for contamination of this vital public resource, and several other cases have produced multi-million dollar settlements out of court.[[84]](#footnote-84)

A MTBE case filed in 2017 by the State of Maryland against major fossil fuel companies (with no dispositive rulings yet) relied explicitly on the public trust to frame its case, stating in the complaint, “The state, as the public trustee, is empowered to bring suit to protect the corpus of the trust – *i.e.* the waters – for the beneficiaries of the trust, *i.e,* the public.” The state asserted public nuisance, trespass, strict product liability, abnormally dangerous activity, and statutory claims. The trespass claim in particular represented the type of hybrid claims described above, where the public trust property interest formed the core of the tort claim, asserting trespass to “the State's possessory interest as the trustee of the State's natural water resources.”[[85]](#footnote-85) In unrelated New Jersey litigation, the public trust was used by a court to overcome the exclusive ownership requirement of trespass law, allowing the state to pursue an NRD claim for contaminated sediments on private property.[[86]](#footnote-86)

 In summary, the PCB and MTBE cases have met with substantial (though not universal)[[87]](#footnote-87) success so far, asserting primarily common law claims to achieve a public trust objective. They are the closest analogues to the atmospheric NRD litigation suggested by this chapter, as they seek recovery of damages against manufacturers for cleanup of contaminated public ecological resources. The challenge will be to convince judges and juries to apply the same or similar claims to fund cleanup of the atmosphere. The climate nuisance cases, though similar in their claims and defendants, are fundamentally different as they have no obvious public trust component, with the exception of Rhode Island’s complaint.[[88]](#footnote-88) The thrust of those cases has been towards recovering adaptation damages, and preliminary rulings are mixed. Two federal district courts have dismissed climate nuisance claims, seemingly on the basis (discussed more below) that the matter should be addressed by the political branches of government, which may reflect a basic unease with the nuisance test when it is not geared towards remedying the harm. Of the remaining cases, most are mired in jurisdictional battles and have not been the subject of dispositive rulings on motions to dismiss.

1. **CAUSATION AND JOINT AND SEVERAL LIAIBLITY**

Causation forms a standard part of any lawsuit. Notably, the causation hurdle is more straightforward in a suit for atmospheric NRDs than for secondary damages resulting from climate disruption. Courts and commentators have pointed out the difficulty of attributing isolated climate harm—such as damage from flooding, fires, droughts, and the like—to human-caused emissions, though the science of attribution is rapidly developing and is invoked in the second-generation climate liability cases. A lawsuit for *primary* damage to the atmosphere (as suggested by this chapter), involves direct causation, because all fossil fuel emissions since the Industrial Revolution theoretically hold potential to raise the concentration of atmospheric CO2 beyond the natural baseline of 280 ppm (the level prior to the Industrial Revolution), disrupting the balance of Earth’s climate system.[[89]](#footnote-89)

Two matters remain, however. First, manufacturer-defendants in analogous cases argue that they are not the proximate cause of the harm, because consumers are the actual emitters. Several key PCB cases have soundly rejected this argument. The court in *San Jose v. Monsanto*, applying California law, held that intervening acts by third parties do not break the causal chain where the acts are “reasonably foreseeable, and should have been anticipated.”[[90]](#footnote-90) It noted, “Here, the Cities allege that Monsanto was aware of the dangers of PCBs, the likelihood of widespread contamination, and the difficulties of disposal and containment—and that, despite those risks, Monsanto continued to promote the sale of PCBs and continued to encourage third parties to use them in their products.”[[91]](#footnote-91) Similarly, the court in the Oregon PCB case found causation established, noting it was sufficient that plaintiffs alleged, “Defendants knew that the PCBs would inevitably wind up polluting Oregon’s waters through the normal, ordinary use of Defendants’ customers.”[[92]](#footnote-92) The federal district court in *Seattle v. Monsanto* adopted a similar approach.[[93]](#footnote-93) An Ohio court found causation could be established by showing Monsanto’s knowledge that high levels of PCBs would inevitably enter Ohio waterways “*notwithstanding* any intervening acts by third parties,” noting, “Monsanto [allegedly] knew that the contaminant *eventually* would enter the waterways by their very nature. Here, since Ohio claims Monsanto did nothing to stop the foreseeable risk, the resulting harm may be causally connected.”[[94]](#footnote-94)

A second matter arises when there are multiple producers of the harmful substance, as is the case with fossil fuels. The issue becomes whether a court will require plaintiffs to trace actual excess (not absorbed) CO2 emissions to particular defendants. Courts are unlikely to require plaintiffs to engage in the impossible task of “fingerprinting” carbon molecules remaining in the atmosphere and tracing them back to particular producers. In the CERCLA context, for example, courts rejected any fingerprinting requirement, opting for a nearly “causation-free” liability scheme.[[95]](#footnote-95) The causation hurdle also appears quite low in cases brought against oil companies in both the MTBE and PCB contexts. In *In re MTBE Products Liability Litigation*, the court applied the New York state law test of tort causation, which holds that “an act or omission is regarded as a legal cause of an injury if it was a substantial factor in bringing about the injury,” and found Exxon liable for groundwater contamination based in part on its 25% market share of gasoline.[[96]](#footnote-96) A more recent MTBE ruling by federal district judge William Smith reasoned that a conventional causation test would leave the public without recourse. Noting that the task of tracing MTBE molecules to particular defendants “will always be in vain” due to the commercial practice of co-mingling supplies,[[97]](#footnote-97) he adopted an expanded approach to causation, noting that other jurisdictions had done the same so as not to leave plaintiffs with “impossible burdens of proof.”[[98]](#footnote-98) These MTBE cases offer a close analogue to the proposed ARL as they target the same fossil fuel industry defendants.

Where multiple actors contribute to contamination and the harm is indivisible, courts may impose joint and several liability to hold any one defendant, or subset of defendants, liable for the entire harm. The liable defendants may sue the other parties for contribution, but the onus of doing so, along with the litigation costs, falls on the liable defendants rather than the government representing the public. The approach can greatly expedite the process of securing funding for a cleanup, because it saves the government from pursuing litigation against all parties and proving their proportionate share of responsibility. In face of climate urgency, such an approach would be most expedient. Courts have imposed joint and several liability in the CERCLA context,[[99]](#footnote-99) even in the face of congressional silence on the matter, and several courts in the MTBE litigation have taken the same approach.[[100]](#footnote-100) But if a defendant can prove a “reasonable basis” for apportioning harm, that defendant’s liability may be limited to the amount of harm attributable to his or her actions.[[101]](#footnote-101) Applying this rule to the climate context, a court could theoretically find each defendant corporation responsible for the amount of emissions attributable to its fossil fuel production, as detailed in the Carbon Majors report described above.

1. **DEFENSES**

Industry defendants typically assert many defenses to liability claims. Most are quite case-specific and well beyond the scope of this chapter. Two are nearly ubiquitous, however: standing and displacement.

1. **STANDING (INCLUDING REDRESSABILITY)**

The doctrine of standing requires a litigant to “demonstrate that it has suffered a concrete and particularized injury that is either actual or imminent,” is “fairly traceable to the defendant,” and “it is likely that a favorable decision will redress that injury.”[[102]](#footnote-102) Sovereigns bringing ARL suits must meet these tests. As to the first, sovereigns’ trustee obligations provide government plaintiffs standing to sue for injury to damaged public trust assets;[[103]](#footnote-103) the closely related *parens patriae* doctrine also forms a “mechanism of standing.”[[104]](#footnote-104) Sovereigns must educate judges that, with respect to the atmospheric trust, there is no overarching global trustee, but rather multiple co-trustees, connected through a parallel order of trust relationships in which nations and sub-sovereigns share the benefits and obligations relating to the common atmospheric trust. In theory, each sovereign trustee has standing to sue for restoration costs of the shared asset, the atmosphere.

The second component of standing, “fairly traceable to the defendant,” is likely to be addressed as part of the causation element explored above. The third component, redressability, requires judicial understanding of the carbon cycle. In the case of an oil spill or land-based hazardous waste dump cleanup, the remediation is quite obvious to courts. Sovereign trustees remove the contamination from the site in a direct and easily observable manner. Sky cleanup of carbon dioxide is less obvious. The natural climate solutions (NCS) projects that scrub the atmosphere of CO2 and sequester carbon in the soil are the only currently feasible projects to accomplish a sky cleanup. The importance of a scientifically-produced Atmospheric Recovery Plan cannot be overestimated, as it serves as the framework providing evidence of redressability, making clear the connection between soils, plants, and drawdown (cleanup) of atmospheric carbon pollution. Courts that are able to comprehend the carbon cycle should find this general aspect of redressability satisfied.

Beyond this, there remains the matter of proportionate contribution to a global sky cleanup. In cases seeking to abate carbon pollution, government or industry defendants often make the claim that climate crisis is a global phenomenon, and that a court order requiring action on the part of one nation, or one state, will not solve the problem -- thus coming up short on redressability. This argument was rejected in *Massachusetts v. EPA*, where the U.S. Supreme Court stated that the Bush II Administration defendants propounded “the erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum. Yet accepting that premise would doom most challenges to regulatory action.”[[105]](#footnote-105) Increasingly, courts hold individual sovereigns accountable for the pollution coming from their jurisdiction. In the Netherlands, an appeals court rejected the government’s argument that the nation’s emissions were so small (less than .1% of global emissions) as to be non-redressable, stating, “[I]t has been established that any anthropogenic greenhouse gas emission, no matter how minor, contributes to an increase in CO2 levels in the atmosphere and therefore to hazardous climate change.”[[106]](#footnote-106)

The redressability argument, of course, takes a slightly different twist in ARL cases as distinguished from ATL cases. In the latter, government defendants emphasize the small proportionate share of emissions. In ARL, the argument focuses on cleanup. It is certainly true that no single jurisdiction can accomplish even close to the lion’s share of atmospheric cleanup. Rather, the global effort requires *all situated jurisdictions* (those with land sequestration potential) to participate. But environmental law already has the tools for a multi-jurisdictional approach to liability and restoration. In the context of species recovery, it is often the case that, because no one sovereign can recover the species, full recovery requires cross-participation by multiple sovereigns. The same is true with an oil spill that migrates between jurisdictional borders. In the atmospheric cleanup context, the contribution of any one region will be fractional – yet each is instrumental to full drawdown of excess atmospheric carbon. Judges understanding the realities of climate science should eschew rigid approaches but rather interpret the redressability requirement within the constraints that nature’s laws impose on human society. Failure to hold responsible corporations financially liable for atmospheric cleanup perpetuates the status quo that rapidly veers towards a scenario of uncontrollable planetary heating.

1. **DISPLACEMENT**

A second defense perpetually raised by defendants in climate cases is that of displacement, which asserts that a statute (typically the Clean Air Act) has “displaced” common law, rendering the latter ineffectual as a basis for a claim. In the leading *American Electric Power* case,the U.S. Supreme Court found that the Clean Air Act, which authorized the U.S. Environmental Protection Agency (EPA) to regulate CO2 emissions, displaced a suit asserting common law nuisance claims against major CO2 emitters despite the fact that EPA had not actually regulated the CO2 emissions.[[107]](#footnote-107) Several climate cases, including some of the second-generation nuisance cases described above, have fallen into the displacement trap, and several appeals are pending. As Professor Katrina Kuh observes, dismissals on the basis of displacement represent fundamental “judicial climate avoidance.”[[108]](#footnote-108)

2

Notably, however, the *AEP* decision did not suggest that displacement could extend to another, entirely separate, cause of action. Sovereigns seeking damages for cleanup of the atmosphere should distinguish NRD claims from the common law nuisance claims that have encountered obstacles, for the two stand in stark contrast. The interests of future generations – forming the core of a public trust action -- are never captured in a nuisance test, which focuses on present interference with a particular right held by the citizens. Moreover, the public trust represents a sovereign obligation that cannot be displaced by statute. As the *Juliana* court observed,

In *AEP,* the Court did not have public trust claims before it and so it had no cause to consider the differences between public trust claims and other types of claims. Public trust claims are unique because they concern inherent attributes of sovereignty. The public trust imposes on the government an obligation to protect the *res* of the trust. A defining feature of that obligation is that it cannot be legislated away. Because of the nature of public trust claims, a displacement analysis simply does not apply.[[109]](#footnote-109)

1. **THE REMEDY**

The remedy stage of atmospheric recovery litigation requires designating a fund to receive the damages and finance the drawdown projects. This requires an administrative structure to solicit projects, evaluate proposals, administer the funding, and supervise the completion of work. Sovereign plaintiffs (even prior to the litigation) may establish a “Sky Trust” for this purpose, in which case the court’s role is simply to approve such trust as a recipient of the funds. Or, the court may set up its own judicial trust, either through settlement processes or through direct order. Three prominent models illuminate possibilities.

*VW Settlement*– In litigation brought by U.S. Department of Justice against Volkswagen (VW) for installing defective pollution control equipment in its automobiles,[[110]](#footnote-110) the court approved a settlement creating an Environmental Mitigation Trust Fund to mitigate millions of tons of NOx pollution that had been emitted into the nation’s airshed. A $2.9 billion fund financed by VW and administered by a court-appointed trustee allocated money to States and Indian Tribe “beneficiary funds” based on the number of illegal vehicles sold in their jurisdictions. The sovereign beneficiaries developed plans, subject to trustee approval, to reduce NOx pollution in their jurisdictions, and their agencies supervised the projects.

*BP Settlement* - In litigation by the U.S. Department of Justice against BP for discharging millions of barrels of oil into the Gulf of Mexico (after a drilling rig exploded in 2010), BP agreed to pay $7.1 billion to the Deepwater Horizon Oil Spill NRD Fund, managed by the Department of Interior, for the joint benefit of the five Gulf state trustees.[[111]](#footnote-111) The Fund distributes money to projects aimed towards cleanup and ecosystem recovery across an area larger than the state of Idaho.

 *California Lead Abatement* - In litigation brought by the state of California and several counties against three major lead paint manufacturers, a 2014 trial court judgment found the companies liable for the cost of removing lead paint in over 3.5 million residences. A $305 million settlement funds a court-ordered lead abatement program administered by the state of California and the counties over a four-year period.[[112]](#footnote-112)

All three instances above involved massive funds and multi-stage implementation aimed towards remediating contamination. While each required some amount of judicial supervision and ongoing jurisdiction, the primary administrative apparatus relied on sovereigns or an independent court-appointed trustee to administer the funds. In the atmospheric recovery context, courts can similarly set up funds administered by sovereign plaintiffs and/or appoint a trustee to finance sequestration projects to clean up the contaminated atmosphere.[[113]](#footnote-113)

 **CONCLUSION**

The narrow window of time to prevent uncontrollable planetary heating is closing rapidly, and if the law is to be relevant at all, it must address both sides of the climate imperative – decarbonization and drawdown of massive amounts of CO2. Atmospheric Trust Litigation is underway to force the first, and the Atmospheric Recovery Litigation described in this chapter aims to spur the latter. ARL envisions suits brought by sovereign trustees – states, tribes, counties, and foreign nations – against fossil fuel carbon majors to fund landscape carbon sequestration projects in their jurisdictions. Based on the model of cleaning up an oil spill, such a litigation strategy is feasible, grounded in law, and likely even anticipated by the fossil fuel corporations themselves. As industry lawyer Ira Gottlieb acknowledged in 2008, “[I]t may only be a matter of time before natural resource trustees file actions for NRD[s] based on climate change effects.”[[114]](#footnote-114)

The approach developed in this chapter lends itself to various scales of litigation. The public trust principle exists not only in every state, but on the federal level (assuming *Juliana’s* recognition of the federal trust is upheld) and in many other nations as well, presenting potential litigation on both national and sub-sovereign levels. On one end of the spectrum, a consortium of states could bring a massive nationwide suit to force funding of restoration across the United States (capitalizing on perhaps 20% of the global potential).[[115]](#footnote-115) On the other end of the spectrum, an ARL effort (not unlike the ATL campaign) could proliferate through multiple parallel suits at the state level and in domestic courts of other nations. Such suits could be brought simultaneously in various jurisdictions, modeled on a shared framework but adapted to unique legal requirements of the various jurisdictions.

Sovereign co-trustees may bring new lawsuits, or they may intervene in existing climate damages suits, pressing public trust claims that fund carbon sequestration (rather than local adaptation measures currently sought by climate plaintiffs).

Any litigation strategy should proceed in sync with the other components of atmospheric recovery. Sovereign leaders should waste no time initiating plans for tapping and maximizing their sequestration potential across landscapes, enlisting scientists to create guidelines for projects and identifying spatially explicit opportunities. They should also begin devising Sky Trust models for administering drawdown projects across their jurisdictions. To bring the atmospheric recovery challenge to the necessary scale, sovereigns should collaborate and unify into coalitions spanning shared ecosystems.

In order for atmospheric NRD actions to succeed, judges must embrace a role that might be thought of as global rescue. At the outset of climate litigation more than a decade ago, courts showed reluctance to intervene in the worsening crisis, displaying what Yale law professor Douglas Kysar and R. Henry Weaver call judicial “nihilism”––“[d]enying [their] own expansive power, [courts] cower[ed] before catastrophe.”[[116]](#footnote-116) At this eleventh hour, judicial intervention may be the only recourse to break a political stalemate threatening life, liberty, and civilization itself. Hawaii Supreme Court Associate Justice Michael Wilson writes, "As the archetypal peril of earth with collapsing ecosystems approaches, legal narratives limiting judicial review [of] carbon-caused global warming will become anachronisms.[[117]](#footnote-117)

***“It is not enough that we do our best; sometimes we must do what is required.”***

***Winston Churchill***

1. Mary Christina Wood, Philip H. Knight Professor, University of Oregon School of Law. This chapter is part of a larger work, *Atmospheric Recovery Litigation Around the World: Funding Landscape Carbon Sequestration Through Suits Against the Fossil Fuel Industry for Climate Natural Resource Damages.* Excellent research assistance and analysis was provided by Callan Barrett, Research Fellow, Global Environmental Democracy Project, and Charles W. Woodward IV, Research Associate, University of Oregon School of Law Environmental and Natural Resources Law Center. Due to space constraints, this chapter contains only minimal citations. For further reference and authorities, see Mary Christina Wood & Dan Galpern, *Atmospheric Recovery Litigation: Making the Fossil Fuel Industry Pay to Restore a Viable Climate System*, 45 Envtl. L. 259 (2015); Michael C. Blumm & Mary Christina Wood, *“No Ordinary Lawsuit”: Climate Change, Due Process, and the Public Trust Doctrine*, 67 Am. U. L. Rev. 1 (2017); Katrina Fischer Kuh, *Judicial Climate Engagement*, 46 Ecology L. Q. (2019). [↑](#footnote-ref-1)
2. James Hansen et al., *Assessing “Dangerous Climate Change”: Requiring Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, PLOS One (2013); G. Philip Robertson, Expert Report for *Juliana v. United States*, Doc. 263-1, 29 (June 28, 2018). [↑](#footnote-ref-2)
3. Bronson W. Griscom et al., *Natural Climate Solutions*, 114 Proc. Nat’l Acad. of Sci. 11645 (2017). [↑](#footnote-ref-3)
4. Stephen Leahy, *One Million Species at Risk of Extinction, UN Report Warns*, Nat’l Geographic (May 6, 2019). [↑](#footnote-ref-4)
5. *Juliana v. United States,* 217 F. Supp. 3d 1224 (D. Or. 2016), on appeal. [↑](#footnote-ref-5)
6. For discussion, see Gerald Torres & Nathan Bellinger, *The Public Trust: The Law’s DNA*, 4 Wake Forest J L Pol’y 281 (2014). [↑](#footnote-ref-6)
7. See *Robinson Twp. v. Pennsylvania*, 83 A.3d 901, 948 (Pa. 2013) (plurality opinion). [↑](#footnote-ref-7)
8. 217 F. Supp. 3d at 1250. [↑](#footnote-ref-8)
9. *Foster v. Wash. Dep’t of Ecology*, No. 14-2-25295-1 SEA, 8 (Wash. Super. Ct. Nov. 15, 2015). [↑](#footnote-ref-9)
10. Such lawsuits do not seek natural resource damages for harm to corollary natural assets such as species, waterways, coastlines, oceans, and forests. [↑](#footnote-ref-10)
11. See *supra*, note 3. [↑](#footnote-ref-11)
12. More categories of analogous litigation continue to emerge. The State of Vermont has filed suit against manufacturers of per-and polyfluoroalkyl substances (PFAS), invoking its *parens patriae* and trust capacity to seek natural resource damages caused by defendants’ products. PFAS are toxic chemicals found in firefighting foams, stain-and-water-resistant fabrics, and Teflon that contaminate groundwater, bioaccumulate, and cause adverse health effects. Pl.’s Compl., State v. 3M Co. par. 10, 185 (Vt. Super. Ct. June 26, 2019). The case is now part of multi-district litigation in the District of South Carolina. [↑](#footnote-ref-12)
13. State v. Exxon Mobil Corp., 126 A.3d 266 (N.H. 2015) (affirming jury verdict), *cert. denied*, 136 S. Ct. 2009 (2016). [↑](#footnote-ref-13)
14. *In re* Methyl Tertiary Butyl Ether (“MTBE”) Prods. Liab. Litig., 725 F.3d 65 (2nd Cir. 2013). *See also* S. Tahoe Pub. Util. Dist. v. Atl. Richfield Co., 2002 Cal. Super. LEXIS 446 (2002) (San Francisco County jury found manufacturer liable under defective product theory). [↑](#footnote-ref-14)
15. N.J. Dep’t of Envtl. Protection v. Exxon Mobile Corp., 183 A.3d 289 (N.J. Super. Ct. Law Div. 2015) ($350 million settlement). [↑](#footnote-ref-15)
16. Rhode Island v. Atl. Richfield Co., 357 F. Supp. 3d 129, 142 (D. R.I. 2018); State v. Hess Corp., 20 A.3d 212, 216-18 (N.H. 2011). [↑](#footnote-ref-16)
17. Lawsuits have been filed by the states of Oregon, Washington, New Mexico, and Ohio, and local governments, including Seattle, Spokane, Portland (City and Port), Berkeley, Oakland, San Jose, Long Beach, San Diego (City and Port), and Westport. [↑](#footnote-ref-17)
18. Pl.’s Compl., State of Oregon v. Monsanto Co., ¶¶9-11 (Jan. 4, 2018); Pl.’s Compl., State of Washington v. Monsanto, ¶¶ 12-20 (Dec. 6, 2016); Pl.’s Compl., State of Ohio v. Monsanto Co., ¶¶ 26-32 (Mar. 5, 2018). [↑](#footnote-ref-18)
19. Because the cases are moving quickly through the court system, this chapter does not present a comprehensive summary. [↑](#footnote-ref-19)
20. City of Seattle v. Monsanto Co., 237 F. Supp. 3d 1096 (W. D. Wash. 2017). [↑](#footnote-ref-20)
21. *Id.* at 1104-05. [↑](#footnote-ref-21)
22. *See infra* note 76. [↑](#footnote-ref-22)
23. *See infra* note 66. [↑](#footnote-ref-23)
24. City of Spokane v. Monsanto Co., 2016 WL 6275164 (E. D. Wash. 2016) (denying Monsanto’s motions to dismiss Spokane’s public nuisance, negligence, Washington Product Liability Act, and equitable indemnity claims); City of Portland v. Monsanto Co., 2017 WL 4236583 (D. Or. 2017) (denying Monsanto’s motion to dismiss Portland’s public nuisance claim and granting leave to amend trespass, negligence, and product liability claims); City of San Diego v. Monsanto Co., 2017 WL 5632052 (S.D. Cal. 2017) (denying Monsanto’s motion to dismiss San Diego’s public nuisance and purpresture claims). [↑](#footnote-ref-24)
25. 562 U.S. 1091 (2010) [hereinafter *AEP*]. [↑](#footnote-ref-25)
26. See, e.g., Pl.’s Compl., County of San Mateo v. Chevron *et al*., ¶ 186 (July 17, 2017). [↑](#footnote-ref-26)
27. See City of New York v. BP, 325 F. Supp. 3d 466, 471-75 (S.D.N.Y. 2018); City of Oakland v. BP, 325 F. Supp. 3d 1017, 1024-28 (N.D. Cal. 2018). [↑](#footnote-ref-27)
28. Kuh, *supra* note 1. [↑](#footnote-ref-28)
29. Geer v. Connecticut, 161 U.S. 519, 525 (1896) (citing Roman law’s public resources as including “the air, the water which runs in the rivers, the sea and its shores [and] wild animals.”). [↑](#footnote-ref-29)
30. *Id.* [↑](#footnote-ref-30)
31. *Id.* at 523. [↑](#footnote-ref-31)
32. 206 U.S. 230, 237 (1907). [↑](#footnote-ref-32)
33. *See* Alan Kanner, *The Public Trust Doctrine,* Parens Patriae*, and the Attorney General as the Guardian of the State’s Natural Resources*, 16 Duke Envtl. L. & Pol’y Forum 57, 82 (2005). [↑](#footnote-ref-33)
34. Matthews v. Bay Head Improvement Ass’n, 471 A.2d 355, 365 (N.J. 1984) (citation omitted). [↑](#footnote-ref-34)
35. *See e.g.,* Envtl. Law Found. v. State Water Res. Control Bd., 26 Cal. App. 5th 844, 856 (2018) (“From ancient Roman roots, the English common law has developed a doctrine enshrining humanity’s entitlement to air and water as a public trust.”); Gerald Torres, *Who Owns the Sky?*, 19 Pace Envtl. L. Rev. 227 (2001); Carolyn Kelly, *Where the Water Meets the Sky: How an Unbroken Line of Precedent from Justinian to* Juliana *Supports the Possibility of a Federal Atmospheric Trust Doctrine*, 27 NYU Envtl L. J. 183 (2019). [↑](#footnote-ref-35)
36. *Foster*, No. 14-2-25295-1 SEA, 2,4 (Wash. Super. Ct. Nov. 15, 2015). [↑](#footnote-ref-36)
37. *See Juliana*, 217 F. Supp. 3d at 1274-1276. Some other courts have refused to recognize air as a public trust asset. *See, e.g.*, *Chernaik v. Brown,* No. 16-11-09273, 2015 WL 12591229 at \*11, n. 7 (Or. Cir. Ct. May 11, 2015), *aff’d by*, 426 P.3d 26 (Or. App. 2019), *cert. granted*, 442 P.3d 1119 (Or. 2019). [↑](#footnote-ref-37)
38. *See* David Hodas, *Natural Resource Damages: A Research Guide*, 9 Pace Envtl. L. Rev. 107, 108 (1991). [↑](#footnote-ref-38)
39. Global Climate Change: Carbon Dioxide, NASA (Oct. 2019), <https://climate.nasa.gov/vital-signs/carbon-dioxide/>. [↑](#footnote-ref-39)
40. *See supra*,note 2. [↑](#footnote-ref-40)
41. For discussion of sovereign trustees, see Wood & Galpern, *supra* note 1, at 128-30. [↑](#footnote-ref-41)
42. United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107. [↑](#footnote-ref-42)
43. Richard Heede, *Carbon Majors: Accounting for Carbon and Methane Emissions 1854-2010*, Climate Mitigation Servs. 8-9, 25-30 (2014). [↑](#footnote-ref-43)
44. Suzanne Goldenberg, *Just 90 Companies Caused Two-Thirds of Man-Made Global Warming Emissions*, The Guardian (Nov. 20, 2013). [↑](#footnote-ref-44)
45. *City of New York,* 325 F. Supp. 3d 466; *City of Oakland*, 325 F. Supp. 3d 1017. [↑](#footnote-ref-45)
46. Rhode Island v. Chevron Corp., 2019 WL 3282007 (D. R.I. 2019). But in dismissing a climate liability case, Judge Alsup observed, “[t]he scope of plaintiffs’ theory is breathtaking. It would reach the sale of fossil fuels anywhere in the world, including all past and otherwise lawful sales, where the seller knew that the combustion of fossil fuels contributed to the phenomenon of global warming.” *City of Oakland*, 325 F. Supp. 3d at 1022. [↑](#footnote-ref-46)
47. See State v. Monsanto Co., No. 18CV00540 (Or. Cir. Ct. Jan. 9, 2019); State v. Monsanto Co., No. A1801237 (Ohio Ct. Com. Pl. Sept. 19, 2018); *City of Seattle,* 237 F. Supp. 3d 1096 (W.D. Wash. 2017); *City of Spokane*, 2016 WL 6275164 (E.D. Wash. 2016); Port of Portland v. Monsanto Co., 2017 WL 4236561 (D. Or. 2017); City of Portland v. Monsanto Co., 2017 WL 4236583 (D. Or. 2017); City of San Jose v. Monsanto Co., 231 F. Supp. 3d 357 (N.D. Cal. 2017); City of San Diego v. Monsanto Co., 2017 WL 5632052 (S.D. Cal. 2017). Notably, not all causes of action survive motions to dismiss. Because the suits are based in state common law, the success of individual claims vary. [↑](#footnote-ref-47)
48. *City of San Jose*, 231 F. Supp. 3d 357. [↑](#footnote-ref-48)
49. *City of Seattle,* 237 F. Supp. 3d 1096. [↑](#footnote-ref-49)
50. State v. Monsanto Co., No. 18CV00540, \*18 (Or. Cir. Ct. Jan. 9, 2019). [↑](#footnote-ref-50)
51. In re MTBE Prods. Liab. Litig., 725 F.3d 65, 91 (2nd Cir. 2013). [↑](#footnote-ref-51)
52. *But see* Commonwealth of Pennsylvania v. Exxon Mobil Corp., 2015 WL 4469247, 14-15 (S.D.N.Y. 2015) (applying Pennsylvania law that limits public nuisance liability to those who owned or operated the sites where the release of hazardous substances occurred). [↑](#footnote-ref-52)
53. While statutory NRD provisions characteristically include air as a trust asset, they do not extend to CO2 pollution. [↑](#footnote-ref-53)
54. See Cynthia Carlson, *Making CERCLA Natural Resource Damage Regulations Work: The Use of the Public Trust Doctrine and Other State Remedies*, 18 Envtl. L. Rep. 13303 (1988). [↑](#footnote-ref-54)
55. *Id.* at 10299; Kanner, *supra*, note 33 at 58 (common law claims are “immediately available” to recover natural resource damages). [↑](#footnote-ref-55)
56. *See id.* at 59 (also suggesting *parens patriae* doctrine as basis for suits). [↑](#footnote-ref-56)
57. William H. Rodgers, Environmental Law Hornbook (1977). [↑](#footnote-ref-57)
58. Edward H. P. Brans, Liability for Damage to Public Natural Resources, 51-53 (2001). [↑](#footnote-ref-58)
59. Some state constitutions and statutes also express the public trust and may be considered for a stand-alone PTD claim. [↑](#footnote-ref-59)
60. 621 P.2d 764, 820 (Wa. Ct. App. 1980). [↑](#footnote-ref-60)
61. 495 F. Supp. 38 (E.D. Va. 1980). [↑](#footnote-ref-61)
62. *Id.* at 40. [↑](#footnote-ref-62)
63. *Md. Dep’t of Nat. Res. v. Amerada Hess Corp.*, 350 F. Supp. 1060, 1067 (D. Md. 1972). [↑](#footnote-ref-63)
64. 313 N.E.2d 409, 411 (Ohio 1974) (internal citations omitted). [↑](#footnote-ref-64)
65. Pl.’s Compl., State of Ohio v. Monsanto Co., ¶¶ 160-72 (Mar. 5, 2018). [↑](#footnote-ref-65)
66. State v. Monsanto Co., No. A1801237 (Ohio Ct. Com. Pl. Sept. 19, 2018). [↑](#footnote-ref-66)
67. *Rhode Island v. Atl. Richfield*, 357 F. Supp. 3d at 144. [↑](#footnote-ref-67)
68. *Id.* at 143-44. [↑](#footnote-ref-68)
69. New Hampshire v. Hess, 161 N.H. 426, 431-32 (2011). The complaint had asserted a property interest, as trustee, over “waters of the state, whether located above or below ground. . . . “ to ground claims in both public nuisance and trespass. Complaint, New Hampshire v. Hess, Par. 2, Count III, IV, WL 22469979 (2003). *See also* San Diego Unified Port District v. Monsanto Co., S.D.Cal. No. 15-cv-578, 2016 WL 5464551, at \*11 (Sept. 28, 2016) (finding that a Port District could maintain action under public trust for "damages for the injury to and loss of use of natural resources deriving from the presence of PCBs in and around the Bay, including the cost of restoring those natural resources.") (internal quotation omitted). [↑](#footnote-ref-69)
70. *See* Pl.’s Compl., State of Rhode Island v. Chevron Corp., ¶ 302, ¶ 312 (July 2, 2018). [↑](#footnote-ref-70)
71. Rhode Island v. Chevron Corp., 393 F. Supp. 3d 142 (D. R.I. 2019). [↑](#footnote-ref-71)
72. *See* Pl.’s Compl, *supra* note 13, at par. 228 (“First Cause of Action: Civil Action for Natural Resource Damages and Restoration “The State, as trustee, may bring a cause of action to recover damages to and restoration of natural resources held in trust by the state.”). [↑](#footnote-ref-72)
73. *See* Carlson, *supra*, note 54 at 10299 n. 41 (citation omitted). [↑](#footnote-ref-73)
74. *Id*; *see* State v. Purdue Pharma, No. CJ-2017-816, 22-23 (Okla. Dist. Ct. Aug. 26, 2019) (slip op) (upholding public nuisance claim against drug manufacturer). [↑](#footnote-ref-74)
75. Notably, the second-generation climate liability cases do not present this hybrid public trust/public nuisance claim, as they seek compensation for repairing or building infrastructure, not public trust property. The one exception is the State of Rhode Island case against carbon majors asserting one public trust claim but without specifically seeking NRDs to fund restoration. *See supra* note 70. [↑](#footnote-ref-75)
76. Some cases or claims have been dismissed or have received adverse rulings on other grounds not relevant to this discussion. [↑](#footnote-ref-76)
77. State v. Monsanto Co., No. 18CV00540, 13-14 (Or. Cir. Ct. Jan. 9, 2019). [↑](#footnote-ref-77)
78. City of Seattle, 237 F. Supp. 3d at 1107 (W.D. Wash. 2017). [↑](#footnote-ref-78)
79. *Id.* at 1104. The analysis involved questions of standing, statute of limitations, and causation. [↑](#footnote-ref-79)
80. Pl.’s Compl., State of Washington v. Monsanto, ¶ 97 (Dec. 6, 2016). [↑](#footnote-ref-80)
81. *Rhode Island v. Atl. Richfield Co.*, 357 F. Supp. 3d at 142. [↑](#footnote-ref-81)
82. Commonwealth of Pennsylvania v. Exxon Mobil Corp., 2015 WL 4469247, 14-15 (S.D.N.Y. 2015). [↑](#footnote-ref-82)
83. In re MTBE Prods. Liab. Litig., 725 F.3d at 91 (listing tort causes of action on which plaintiff prevailed, including negligence, trespass, public nuisance, and failure to warn). [↑](#footnote-ref-83)
84. Brian J. Clark, *Articles & Advisories: MTBE Litigation Update: South Tahoe and Beyond*, Buchanan Ingersoll & Rooney, PC (April 5, 2011). [↑](#footnote-ref-84)
85. *See* Pl.’s Compl., State of Maryland v. Exxon Mobil Corp., No. 1:18-cv-00459, ¶ 350 (D. Md. Dec. 13, 2017); *see also id.* ¶ 20 (“The state has a . . . natural-resource-trustee interest in protecting the waters of the state from contamination. . . .”). [↑](#footnote-ref-85)
86. *Department of Environmental Protection v. Deull Fuel*, no. aTl-l-1839-18 (N.J. Super. Ct. Law Div. Aug. 8, 2019); *but see* *New Jersey Department of Environmental Protection v. Hess,* Mid-l- 4579-18 (N.J. Super. Ct. law Div. Dec. 21, 2018) (dismissing state’s trespass claim for lack of exclusive possession). [↑](#footnote-ref-86)
87. In re Methyl Tertiary Butyl Ether (“MTBE”) Prods. Liab. Litig., 162 F. Supp. 3d 247 (S.D.N.Y. 2015) (dismissing trespass, unfair marketing, and public nuisance claims). [↑](#footnote-ref-87)
88. Though the State of Rhode Island included a stand-alone PTD claim in its complaint, it failed to assert any relief specifically tied to damage of public trust assets. [↑](#footnote-ref-88)
89. A significant share of CO2 emissions remains in the atmosphere for centuries, even though a portion is also relatively quickly absorbed by terrestrial systems and the ocean. [↑](#footnote-ref-89)
90. 231 F. Supp. 3d 357, 364 (N.D. Cal. 2017) (citation omitted). [↑](#footnote-ref-90)
91. *Id.* [↑](#footnote-ref-91)
92. State v. Monsanto Co., No. 18CV00540, \*14 (Or. Cir. Ct. Jan. 9, 2019). [↑](#footnote-ref-92)
93. City of Seattle v. Monsanto Co.,237 F. Supp. 3d 1096, 1107 (W. D. Wash. 2017) (noting Seattle’s allegation that “PCBs foreseeably leached into Seattle’s waterways *through the routine use of PCB products*”). [↑](#footnote-ref-93)
94. State v. Monsanto Co., No. A1801237, 5-6 (Ohio Ct. Com. Pl. Sept. 19, 2018). [↑](#footnote-ref-94)
95. Craig N. Johnston, et al., Legal Protection of the Environment 563 (3d ed. 2010). [↑](#footnote-ref-95)
96. 725 F.3d 65, 116 (2d Cir. 2013) (internal quotations omitted). [↑](#footnote-ref-96)
97. ##  Rhode Island v. Atl. Richfield Co., 357 F. Supp. 3d 129, 137 (D. R.I.) (“when some volume of MTBE is found in the environment, chemical tests attempting to trace it back to its source always will be in vain. . . . Turtles all the way up, as far as the state can tell.”) (citations to complaint omitted).

 [↑](#footnote-ref-97)
98. *Id.* (quoting State v. Exxon Mobil Corp., 126 A.3d 266, 297–98 (N.H. 2015)). [↑](#footnote-ref-98)
99. For the EPA’s description of the CERCLA liability scheme, see EPA: Superfund Liability, available at https://www.epa.gov/enforcement/superfund-liability. [↑](#footnote-ref-99)
100. *Id.* [↑](#footnote-ref-100)
101. *See* Washington v. United States, 922 F. Supp. 421, 424-26 (W.D. Wash. 1996) (discussing apportionment of harm in CERCLA context. [↑](#footnote-ref-101)
102. Massachusetts v. EPA, 549 U.S. 497, 517 (2007). [↑](#footnote-ref-102)
103. Characteristic of language in a complaint is Maryland’s assertion in an MTBE case, “The State, as the public trustee, is empowered to bring suit to protect the corpus of the trust-i.e., the waters-for the beneficiaries of the trust-i.e., the public.” Pl.’s Compl., State of Maryland v. Exxon Mobil Corp., No. 1:18-cv-00459, ¶ 21 (D. Md. Dec. 13, 2017); *see also* Pl.’s Compl., State of Washington v. Monsanto Co., No. 16-2-29592-6 SEA, ¶ 14 (“The State has standing to bring this lawsuit as trustee of all aforementioned public natural resources.”). [↑](#footnote-ref-103)
104. *See* State v. Monsanto Co., No. A1801237, 5-6 (Ohio Ct. Com. Pl. Sept. 19, 2018). [↑](#footnote-ref-104)
105. 549 U.S. 497, 524 (2007). [↑](#footnote-ref-105)
106. #  Urgenda Found. v. Netherlands, HAZA C/09/00456689, ¶ 4.79 (Hof 2015) (emphasis added).

 [↑](#footnote-ref-106)
107. *AEP*,562 U.S. 1091 (2010). [↑](#footnote-ref-107)
108. Kuh, *supra* note 1. [↑](#footnote-ref-108)
109. Juliana v. United States, 217 F. Supp. 3d 1224, 1260 (2016); *contra* Alec L. v. Jackson, 863 F. Supp. 2d 11 (D. D.C. 2012)) (adopting displacement theory to dismiss ATL claim). Another related defense, beyond the scope of this chapter, is the “political question” defense, which limits courts from hearing issues that are fundamentally “political” in nature. [↑](#footnote-ref-109)
110. *Volkswagen Clean Air Act Civil Settlement*, U.S. EPA, <https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement>. [↑](#footnote-ref-110)
111. *Deepwater Horizon Oil Spill Settlements: Where the Money Went*, Nat’l Oceanic Atmospheric Admin., <https://www.noaa.gov/explainers/deepwater-horizon-oil-spill-settlements-where-money-went>. [↑](#footnote-ref-111)
112. People v. Conagra Grocery Prods., 17 Cal. App. 5th 51 (2017). [↑](#footnote-ref-112)
113. Remedies in NRD actions are often the subject of settlement negotiations and consent decrees. Cases make clear “trustees can settle suits with far less than a full damages picture.” N.J. v. Exxon, 183 A.3d 289, 318 (2015). [↑](#footnote-ref-113)
114. Ira Gottlieb et al., *Natural Resource Damages for Climate Change—An Idea Whose Time Has Not Yet Come, Part I: NRD Claims Are Not Currently Viable Under CERCLA*, 20 Envtl. Claims J. 256, 257 (2008). [↑](#footnote-ref-114)
115. Robertson, *supra* note 2, at 29. [↑](#footnote-ref-115)
116. R. Henry Weaver & Douglas Kysar, *Courting Disaster: Climate Change and the Adjudication of Catastrophe*, 93 Notre Dame L. Rev. 295, 329 (2017). [↑](#footnote-ref-116)
117. Michael D. Wilson, *Climate Change and the Judge as Water Trustee*, 48 ELR 10235 (2018). [↑](#footnote-ref-117)