University of St. Thomas Journal of Law and Public Policy

Volume 16
Issue 1 *The Return of Public Goods*

Article 10

March 2023

# The Atmosphere as a Global Public Good

Patrick A. Parenteau

Follow this and additional works at: https://ir.stthomas.edu/ustjlpp

 Part of the Environmental Law Commons, Health Law and Policy Commons, Law and Society Commons, Legislation Commons, Other Law Commons, and the Public Law and Legal Theory Commons

Recommended Citation
Patrick A. Parenteau, *The Atmosphere as a Global Public Good*, 16 U. ST. THOMAS J.L. & PUB. POL'Y 217 (2023).
Available at: https://ir.stthomas.edu/ustjlpp/vol16/iss1/10

This Article is brought to you for free and open access by UST Research Online and the University of St. Thomas Journal of Law and Public Policy. For more information, please contact the Editor-in-Chief at jlpp@stthomas.edu.

# THE ATMOSPHERE AS A GLOBAL PUBLIC GOOD

PATRICK PARENTEAU*

## I. BACKGROUND

Public goods have two defining features. One is "non-rivalry," meaning that one person's enjoyment of a good does not diminish the ability of other people to enjoy the same good. The other is "non-excludability," meaning that no one can be prevented from enjoying the good thing. Air quality is an example of a public good. One person's breathing of fresh air does not reduce air quality for others to enjoy, and no one can be prevented from breathing the air. Public goods are defined in contrast to private goods, which are, by definition, both rival and excludable.

Unlike private goods, public goods are a source of market failure due to the "free-rider" problem: individuals have little incentive to voluntarily provide public goods when they can simply enjoy the benefits of public goods provided by others. Because individuals and firms face free-riding incentives when it comes to protecting the environment, policies are often put in place to limit pollution, restrict resource exploitation, or create the right incentives to promote or protect environmental quality.

The free-rider problem was captured in Garrett Hardin's classic, "The Tragedy of the Commons."[1] That tragedy continues to play out today as illustrated by the collapse of the Atlantic northwest cod fishery. In 1992, Northern Cod populations fell to one percent of historical levels, due in large part to decades of overfishing.[2] This prompted the Canadian Ministry of Fisheries and Oceans to close the fishery, thus eliminating a traditional

* Professor of Law Emeritus and Senior Fellow for Climate Policy at Vermont Law and Graduate School.

[1] GARRETT HARDIN, THE TRAGEDY OF THE COMMONS (Phoenix/BFA Films & Video, 1971)

[2] Jenny Higgins, *Cod Moratorium*, HERITAGE NEWFOUNDLAND AND LABRADOR (2009), https://www.heritage.nf.ca/articles/economy/moratorium.php ("A variety of factors led to the commercial extinction of northern cod in 1992. Increasingly efficient technology allowed fishers to find and harvest unprecedented amounts of cod, while stronger vessels allowed fleets from around the world to visit and work on the Grand Banks for months at a time. At the same time, regulations safeguarding cod stocks did not evolve alongside the world's ability to harvest fish, and governments or international bodies sometimes assigned quotas based on economic factors rather than ecological ones.").

livelihood for about 30,000 people. Three decades later, the fishery still has not recovered.[3]

Due to these market failures, the government has a special role in conserving and managing public goods. While markets generally allocate private goods efficiently, governmental intervention is usually required for the efficient and fair allocation of public goods. Indeed, this explains why goods such as bridges, parks, police protection, and fire departments are usually financed with tax revenues that governments collect. Government serves as a coordinating mechanism that provides public goods for the benefit of society.

Global public goods are those that benefit all countries, people, and generations.[4] The International Task Force on Global Public Goods has defined global public goods as, "issues that are broadly conceived as important to the international community, that for the most part cannot or will not be adequately addressed by individual countries acting alone and that are defined through a broad international consensus or a legitimate process of decision-making."[5]

The ozone layer is an example of a global public good that is universally recognized. The ozone layer filters out harmful ultraviolet radiation, which is associated with an increased prevalence of skin cancer and cataracts, reduced agricultural productivity, and disruption of marine ecosystems. The Montreal Protocol (MP) dealing with the phase-out of ozone-depleting chemicals is an outstanding example of an international regime created to restore and safeguard the integrity of the ozone layer for the global common good. [6] It is credited by many as the most successful multilateral environmental treaty. The United States ratified the MP in 1988 and has joined four subsequent amendments. The U.S. has taken strong domestic action to phase out the production and consumption of ozone-depleting substances (ODS) such as chlorofluorocarbons (CFCs) and halons. With full implementation of the MP, the U.S. Environmental Protection Agency (EPA)

---

[3] Sarah Smellie, *After Almost 3 Decades, Cod are Still Not Back off N.L. Scientists Worry it May Never Happen*, CBC NEWS (Apr. 19, 2021), https://www.cbc.ca/news/canada/newfoundland-labrador/cod-return-1.5992916#:~:text=back%20off%20N.L.-,Scientists%20worry%20it%20may%20never%20happen,within%20the%20federal%20Fisheries%20Department.

[4] T A FAUNCE, *Global Public Goods*, *in* ENCYCLOPEDIA OF APPLIED ETHICS 523 (Ruth Chadwick ed., 2d ed. 2012).

[5] REPORT OF THE INTERNATIONAL TASK FORCE ON GLOBAL PUBLIC GOODS, MEETING GLOBAL CHALLENGES 13 (2006).

[6] U.S. DEP'T. OF STATE, OFF. OF ENV'T. QUALITY, THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER, https://www.state.gov/key-topics-office-of-environmental-quality-and-transboundary-issues/the-montreal-protocol-on-substances-that-deplete-the-ozone-layer/.

estimates that "Americans born between 1990 and 2100 are expected to avoid 443 million cases of skin cancer, approximately 2.3 million skin cancer deaths, and more than 63 million cases of cataracts, with even greater benefits worldwide."[7] The MP has also helped keep a lid on runaway climate change.

ODS are also potent greenhouse gases that contribute to the radiative forcing of climate change.[8] Scientists have determined that the ODS contribution to radiative forcing most likely would have been much larger if the ODS link to stratospheric ozone depletion had not been recognized in 1974 by pioneering physicists like F. Sherwood Rowland and Mario Molina and followed by a global commitment to reducing their production.[9] The climate protection already achieved by the MP alone is far larger than the reduction target of the first commitment period of the Kyoto Protocol under the United Nations Framework Convention on Climate Change (UNFCCC). The Kigali Amendment, which entered into force in 2019, aims for the phase-down of hydrofluorocarbons (HFCs) by cutting their production and consumption.[10] "The goal is to achieve over an 80 percent reduction in HFC consumption by 2047. The impact of the amendment will avoid up to a 0.5-degree Celsius increase in global temperature by the end of the century."[11]

Eminent economists such as Sir Nicholas Stern, former British Exchequer, have called climate change the "greatest market failure the world has seen."[12] It is a quintessential example of the free-rider problem because each country's emissions of greenhouse gases contribute cumulatively to the increase of the overall concentration, and each country's abatements entail higher cost than benefit unless effective collective actions take place. Because the climate is a global common good, the benefits of emissions reductions undertaken in one country will mostly accrue outside its borders. As a result, countries acting in their rational self-interest are incentivized to

---

[7] *Id.*

[8] *Id.*

[9] GUUS J. M. VELDERSET AL., THE IMPORTANCE OF THE MONTREAL PROTOCOL IN PROTECTING CLIMATE, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 4814–4819 (Mar. 2007), DOI: 10.1073/pnas.0610328104.

[10] *The Montreal Protocol Evolves to Fight Climate Change,* UNITED NATIONS ENVIRONMENT INDUSTRIAL DEVELOPMENT ORGANIZATION, https://www.unido.org/our-focus-safeguarding-environment-implementation-multilateral-environmental-agreements-montreal-protocol/montreal-protocol-evolves-fight-climate change#:~:text=Aiming%20at%20protecting%20the%20climate,agreed%20to%20amend%20the%20Protocol (last visited Aug. 15, 2022).

[11] *Id.*

[12] Alison Benjamin, *Stern: Climate Change a 'Market Failure*,' THE GUARDIAN (Nov. 29, 2007), https://www.theguardian.com/environment/2007/nov/29/climatechange.carbonemissions#:~:text=%22Climate%20change%20is%20a%20result,wars%20of%20the%20last%20century.

minimize their mitigation efforts and free ride on those of others. This fundamental problem has constrained all past attempts to reach international climate agreements, including the Paris Agreement. The free-rider problem also raises questions of climate justice, given that many of the countries likely to suffer the most from climate change are typically those least responsible for emitting greenhouse gases.

It seems incontrovertible that a stable climate system qualifies as a global public good. The question is what the role of law is in addressing the atmospheric pollution that threatens the integrity of the climate system and all that depend on it. The remainder of this article will examine some of the ways in which the law is being employed to confront the forces that are pushing human civilization closer and closer to the climate cliff.

## II. THE ATMOSPHERE AS A PUBLIC TRUST RESOURCE

The venerable Public Trust Doctrine (PTD), with roots in Roman Law, has been receiving increased attention as a framework for addressing contemporary environmental crises, including climate change and biodiversity loss.[13] At its core, the PTD is based on the concept that certain natural resources are *res communes* as defined in the Justinian Code and are part of the global commons. [14] As such, they cannot be fairly or effectively managed by private owners. Rather, these resources are held in trust by the government, which must manage their consumptive use and protection on behalf of present and future generations. Although historically the PTD applied to a limited set of natural resources such as shellfish beds and submerged lands, courts and legal scholars have expanded the definition of trust resources to include wildlife, oceans, and ecosystem services, generally.[15]

In the United States, the PTD has been used to prevent states and other governmental entities from conveying public trust resources, such as submerged lands or municipal harbors, into private ownership, to create beach access, and to otherwise ensure public access to water-based resources. The seminal case establishing the scope and effect of this doctrine is *Illinois*

---

[13] Mary Turnipseed Ph.D. et al., *Reinvigorating the Public Trust Doctrine: Expert Opinion on the Potential of a Public Trust Mandate in U.S. and International Environmental Law*, 52 ENV'T: SCI AND POL'Y FOR SUSTAINABLE DEV. VOL. 5, 6–14 (2010).

[14] Charlotte Ku, *The Concept of Res Communis in International Law,* 12 HIST. OF EUROPEAN IDEAS VOL. 4, 459 (1990).

[15] MICHAEL C. BLUMM & MARY WOOD, THE PUBLIC TRUST DOCTRINE IN ENVIRONMENTAL AND NATURAL RESOURCES LAW (3d ed. 2021).

*Central Railroad v. Illinois*.[16] In this case, the State of Illinois wanted to grant the entire Chicago waterfront to Illinois Central Railroad. The Supreme Court determined that Illinois held title to these lands in trust for the public and could not alienate the public's rights in the submerged lands. In the 1988 case *Phillips Petroleum Co. v. Mississippi,* the Supreme Court expanded this doctrine by holding that the principles underlying it applied to all water influenced by the ocean's tide, regardless of whether it was navigable or part of a navigable body of water.[17]

The doctrine was given new life and broader scope with the publication of the seminal article, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, by Professor Joseph Sax, who argued that it could form the basis for lawsuits to compel states and other governmental entities to protect certain natural resources, particularly water-based resources, from development and other threats.[18] Sax argued that the PTD imposed an affirmative duty on the states to protect those resources for present and future generations and that it empowered the courts to apply greater scrutiny to the actions and inactions of government agencies charged with managing these resources.[19] Sax maintained that the PTD encompasses a legal right that is: (1) vested in the public; (2) enforceable against the government; and (3) based on the science of ecology.[20]

Since then, some states, notably California, have applied the common law doctrine to protect rivers, lakes, and other water-based resources as well as land-based resources such as birds and other wildlife. In the famous Mono Lake case in 1983, the California Supreme Court held that the PTD required the state to consider wildlife, scenic, and other environmental values in making water allocation decisions.[21] That case has since formed the basis of

---

[16] Illinois Central Railroad v. Illinois, 146 U.S. 387, 452 (1892) ("The state can no more abdicate its trust over property in which the whole people are interested, like navigable waters and soils under them, so as to leave them entirely under the use and control of private parties, except in the instance of parcels mentioned for the improvement of the navigation and use of the waters, or when parcels can be disposed of without impairment of the public interest in what remains, than it can abdicate its police powers in the administration of government and the preservation of the peace.").

[17] Phillips Petroleum Co. v. Mississippi, 484 U.S. 469 (1988).

[18] JL Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471 (1970).

[19] *Id.*

[20] *Id.*

[21] Nat'l Audubon Soc'y v. Superior Ct, 33 Cal.3d 419 (1983).

a robust PTD in California that courts in Louisiana and Hawaii have also adopted.[22]

More recently, the Pennsylvania Supreme Court has issued a pair of landmark rulings interpreting the "Environmental Rights Amendment of the Commonwealth's constitution to include public trust obligations."[23] Article I, section 27 of Pennsylvania's constitution requires the state to "conserve and maintain" public resources "for the benefit of all the people."[24] In the first decision, the PA Supreme Court held unconstitutional major parts of Pennsylvania's oil and gas law designed to facilitate the development of natural gas from the Marcellus Shale.[25] After noting that public natural resources are owned in common by the people, including future generations, and that the state as trustee has a fiduciary duty to conserve and maintain them, the court stated: "The plain meaning of the terms conserve and maintain implicates a duty to prevent and remedy the degradation, diminution, or depletion of our public natural resources."[26] The court said the state has two separate obligations as trustee. The first is "a duty to refrain from permitting or encouraging the degradation, diminution, or depletion of public natural resources..."[27] The second is a duty "to act affirmatively to protect the environment, via legislative action."[28]

The opinions in the Robinson Township cases provide an elegant framework for examining how the general law of trusts can be applied to natural resource conservation. The PA Supreme Court held that the Commonwealth is bound by the private trust duties of loyalty (administering the trust for the benefit of the people), impartiality (managing the interests of all beneficiaries, including the interests of current and future generations), and prudence (exercising "reasonable care, skill, and caution"). While the trustee has some discretion with respect to the corpus or assets of the trust, it "may use the assets of the trust 'only for purposes authorized by the trust or

---

[22] Dave Owen, *The Mono Lake Case, the Public Trust Doctrine, and the Administrative State*, 45 U.C.D. L. REV. 1099 (2012).

[23] Robinson Twp. v. Commonwealth, 83 A.3d 901, 999–1000 (Pa. 2013). Affirmed and broadened: Robinson Twp. v. Commonwealth, 637 Pa. 239 (Pa. 2016); see also, John C. Dernbach, *Taking the Public Trust Seriously: The Pennsylvania Supreme Court's Landmark Decision in PEDF v. Commonwealth*, (July 1, 2017), https://johndernbach.com/2017/07/taking-public-trust-seriously-pennsylvania-supreme-courts-landmark-decision-pedf-v-commonwealth/.

[24] PA. CONST. art. I, § 27.

[25] Robinson Township, Washington County v. Commonwealth, 83 A.3d 901 (Pa. 2013).

[26] *Id.* at 957 (plurality opinion).

[27] *Id.*

[28] *Id*. at 958.

necessary for the preservation of the trust...'"[29] Under private trust law, the court said, "proceeds from the sale of trust assets are part of the corpus of the trust." A recurring point in the majority opinion is that the Commonwealth must use public natural resources as a trustee, and not as a proprietor, and not seek to maximize monetary returns to the state treasury. The court suggested that an accounting or independent audit may be needed to ensure that royalty payments into the general fund are ultimately used in accordance with the trustee's obligation to conserve and maintain our natural resources.[30]

The PTD or related principles appear in the laws of many countries. The courts and legislative bodies of at least ten countries have applied the PTD to protect a wide variety of natural resources and citizens' rights to access and benefit from those resources. As Michael C. Blumm and Rachel D. Guthrie found in their review of ten countries: "Courts, legislatures, and voters in the countries considered in this study have significantly expanded the PTD beyond the reach of the traditional doctrine, beyond the reach of the *Mono Lake* decision, perhaps even beyond the Saxion vision, as articulated over four decades ago."[31] The authors conclude that the PTD is leading a "vibrant and significant life abroad."

The PTD also has its detractors. Patrick Deveney and James L. Huffman have argued that Roman law only considered shorelines and other areas "common to all" until an individual claimed ownership of them.[32] Moreover, note the critics, both Roman and English monarchs had the power to grant ownership of these resources to individuals at will. Finally, Huffman and others have argued that environmental protection was not the original motivation of these earlier legal concepts.[33]

Sax himself fully acknowledged the historical murkiness of the PTD's origin, cautioning that "only the most manipulative of historical readers could extract much binding precedent from what happened a few centuries ago in England" and "neither Roman Law nor the English experience with lands underlying tidal waters is the place to search for the core of the trust idea."[34]

---

[29] *Id*. at 978.

[30] *Id* at 913.

[31] Michael C. Blumm & Rachel D. Guthrie, *Internationalizing the Public Trust Doctrine: Natural Law and Constitutional and Statutory Approaches to Fulfilling the Saxion Vision*, 45 U.C.D. L. REV. 741 (2012).

[32] Patrick Deveney, *Title, Jus Publicum and the Public Trust: An Historical Analysis*, 1 SEA GRANT L. J. 13 (1976); James L. Huffman, *Speaking of Inconvenient Truths–A History of the Public Trust Doctrine*, 18 DUKE ENV'T. L. POL'Y F. 1 (2007).

[33] James L. Huffman, *Fish out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 ENV'T. L. 527 (1989).

[34] SAX, *supra* note 18, at 485.

The PTD embodies the interrelated concepts of intergenerational equity and sustainable development. As defined by the 1987 Brundtland Report (*Our Common Future*), the concept of sustainable development means "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[35] Mandating that governmental trustees treat the interests of current and future citizens equally inherent to the PTD provides the mechanism to achieve intergenerational equity. Though the notion of intergenerational equity appears throughout international environmental law, the interests of future generations in functioning ecosystems have proved especially difficult to protect. The need to explore new institutions to "address the legitimate interests of future generations" was one of the key recommendations of the 2011 Nobel Laureate Symposium on Global Sustainability.[36]

## III. ATMOSPHERIC TRUST LITIGATION

Attempts to employ the PTD to force stronger governmental measures to confront the climate crisis have so far met with little success in American courts. The world's foremost climate scientists have made clear that atmospheric pollution imperils the habitability of Earth and jeopardizes the stability of human civilization.[37] Scientists warn of dangerous "tipping points" that could unleash runaway climate change.[38] Yet, governments have not only failed to curb emissions, but the wealthiest nations led by the U.S. have for many decades continued to subsidize and deepen our reliance on fossil fuels.[39] Though the Biden Administration has made climate action a top priority for both domestic and international policy, it has faced strong opposition in Congress and an ultra-conservative Supreme Court skeptical of

---

[35] REPORT OF THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT: OUR COMMON FUTURE (1987).

[36] *3rd Nobel Laureate Symposium on Global Sustainability; Transforming the World in an Era of Global Change, Stockholm*, May 16–19, 2011, http://globalsymposium2011.org/wpcontent/uploads/2011/09/Final_sthlm_memo_ES.pdf.

[37] The Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, (2021) ("Climate change is already affecting every inhabited region across the globe, with human influence contributing to many observed changes in weather and climate extremes.").

[38] Robert McSweeney, *Explainer: Nine 'Tipping Points' That Could be Triggered by Climate Change*, CARBON BRIEF (Oct. 2, 2020), https://www.carbonbrief.org/explainer-nine-tipping-points-that-could-be-triggered-by-climate-change.

[39] JAMES GUSTAVE SPETH, THEY KNEW: THE US FEDERAL GOVERNMENT'S FIFTY-YEAR ROLE IN CAUSING THE CLIMATE CRISIS, (MIT Press 2021).

regulatory agencies like the EPA asserting broad authority under vintage laws like the Clean Air Act of 1970 to impose stringent measures on coal-fired power plants and other carbon-intensive industries.

In the absence of meaningful action by Congress, climate activists have turned to the judicial system. Spearheaded by Our Children's Trust (OTC), youth plaintiffs have launched a barrage of lawsuits in every state seeking: (1) constitutional protection of a right to a livable planet and (2) judicial remedies requiring governments to develop and implement climate stabilization and recovery plans that accomplish science-based emissions reductions coupled with protection and expansion of the natural systems, forests, wetlands, and soils, that sequester carbon and support biodiversity conservation.

The results have been disappointing. In one of the earliest OTC cases, the U.S. District Court for the District of Columbia ruled that the PTD was solely a creature of state common law and did not provide a basis under federal law to assert claims for climate mitigation.[40] The court cited a decision by the U.S. Supreme Court involving claims to ownership of the bed of the Missouri River in Montana in which the Court, arguably in dictum since it was not necessary to the resolution of the ownership issues stated "the public trust doctrine remains a matter of state law " and its "contours... do not depend upon the Constitution."[41] In the alternative, the district court ruled that "even if the public trust doctrine had been a federal common law claim at one time, it has subsequently been displaced by federal regulation, specifically the Clean Air Act."[42] The district court cited the Supreme Court's decision in *American Electric Power Company v. Connecticut*, where the Court held that "the Clean Air Act and the EPA actions it authorizes displace any federal common law right to seek abatement of carbon-dioxide emissions from fossil-fuel-fired power plants."[43] The D.C. Circuit affirmed this in an unpublished opinion, and the Supreme Court denied petition for certiorari.[44]

In 2015, twenty-one children, represented by OTC filed a lawsuit—*Juliana v. United States*—against the U.S. government for violating their constitutional right to life, liberty, and property through affirmative actions that not only enabled but exacerbated climate change.[45] OTC argued that the United States continued to permit, authorize, and subsidize fossil fuel

[40] Alec L. v. Jackson, 863 F. Supp. 2d 11 (D.D.C. 2012).

[41] PPL Montana, LLC v. Montana, 565 U.S. 576, 596 (2012).

[42] Alec L., 863 F. Supp. 2d at 16.

[43] Amer. Elec. Power Co. v. Connecticut, 564 U.S. 410, 420 (2011).

[44] Alec L. v. McCarthy, 574 U.S. 1047(2014).

[45] Juliana v. United States, 217 F.Supp.3d 1224 (D. Or. 2016).

extraction and consumption.[46] The youth plaintiffs also asserted a claim based on the federal PTD.[47]

Oregon Federal Judge Anne Aiken denied the government's motion to dismiss in a remarkable ruling in which she concluded "I have no doubt that a climate system capable of sustaining human life is fundamental to a free and ordered society;" and, that OTC had "state[d] a claim for a due process violation."[48] Judge Aiken also disagreed with the conclusion of D.C. Courts that the *PPL Montana* decision foreclosed a claim based on federal PTD.[49] However, before the case went to trial, the Ninth Circuit intervened and in a 2-1 ruling held that although the youth plaintiffs had shown immediate injuries traceable to the government's actions and inactions on climate change, the relief they were requesting, which the court characterized as "a comprehensive scheme to decrease fossil fuel emissions and combat climate change", would exceed a federal court's remedial authority.[50] In her spirited dissent, Judge Josephine L. Staton stated "It is as if an asteroid were barreling toward Earth and the government decided to shut down our only defenses."[51] Judge Staton believed that "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."[52] Unpersuaded, the majority vacated Judge Aiken's decision and remanded the case for disposition.

On remand, OTC moved to amend the complaint to seek only a declaratory judgment on the constitutional claim and thereby "cure" the defect that the Ninth Circuit found in the broader relief sought in the original complaint. The Department of Justice (DOJ), now under the control of the Biden administration, maintained the same position as its predecessor and opposed the amendment insisting that the case must be dismissed with prejudice. Judge Aiken took the unusual step of ordering the parties into mediation, encouraging the DOJ to seriously consider options for settlement. The settlement talks broke down in the summer of 2021 and the parties are

---

[46] *Id.* at 1234.

[47] *Id.* at 1253.

[48] *Id.* at 1250.

[49] *Id.* at 1256. ("A close examination of [PPL] reveals that it cannot fairly be read to foreclose application of the public trust doctrine to assets owned by the federal government.").

[50] Juliana v. United States, 947 F.3d 1159, 1171 (9th Cir. 2020) ("There is much to recommend the adoption of a comprehensive scheme to decrease fossil fuel emissions and combat climate change, both as a policy matter in general and a matter of national survival in particular. But it is beyond the power of an Article III court to order, design, supervise, or implement the plaintiffs' requested remedial plan.").

[51] *Id.* at 1175.

[52] *Id*. at 1182.

now back in court awaiting a ruling from Judge Aiken on whether to allow the amended complaint and restart the litigation.

OTC has not had much luck in state court either. On October 22, 2020, the Oregon Supreme Court rejected claims by youth climate activists seeking to declare the atmosphere a public trust resource and to expand the state's PTD to address climate change. In a 6-1 decision, the court ruled that the State did not have an affirmative "fiduciary" obligation to undertake measures to reduce greenhouse gas (GHG) emissions to protect environmental resources, such as navigable waters, that are subject to the PTD. [53] The plaintiffs argued that in managing public trust resources, the state must act similarly to that of a trustee of a private trust, which includes a fiduciary duty to protect trust resources. The court recognized that the state and private trustees share a common responsibility to act prudently. However, the court concluded that the state's obligations do not encompass all the responsibilities of a private trustee and declined to find, "under the legal theory . . . articulate[d] in this case," that "the state has fiduciary obligations under the public trust doctrine that require . . . [it to] protect public trust resources from the effects of climate change."[54]

The court left open the possibility that the PTD could be expanded to include other natural resources. But because the case did not involve claims of damage to specific navigable waters protected by the trust and rather abstract claims regarding damage to those resources arising from climate change, it was inappropriate to issue any declaration requiring action by the State.[55] Thus, a different outcome might be possible in a subsequent suit alleging damage to a specific body of water from the effects of climate change and the failure of the State to take reasonable measures to protect it.

OTC cases faced similar fates in Alaska and Florida. In *Kanuk v. Alaska Dep't. of Natural Resources*, [56] the Alaska Supreme Court affirmed the dismissal of an action brought by six children under the Alaska constitution and the PTD against the State of Alaska seeking to impose obligations on the State to address climate change. The court ruled that three of the plaintiffs' claims for relief asking the court to set carbon dioxide emissions standards and order the state to take actions to meet the standards were nonjusticiable political questions because they required "a science and policy-based

---

[53] Chernaik v. Brown, 475 P.3d 68 (Or. 2020).

[54] *Id.* at 168–69.

[55] *Id*. at 169–70 ("We do not foreclose the possibility that the doctrine could expand to include other resources in the future, but the test that plaintiffs urge us to adopt sweeps too broadly. We also do not foreclose the possibility that the doctrine might be expanded in the future to include additional duties imposed on the state.").

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

inquiry" better left to the executive or legislative branches of government.[57] The court also declined to issue a declaratory judgment on the scope of the PTD reasoning that it would neither compel the State to take any particular action nor advance the plaintiffs' interests.[58]

The *Kanuk* holding was recently reinforced in *Sagoonic v. State of Alaska* where OTC sought an order mandating the adoption of a "climate recovery plan" that is "consistent with global emissions reduction rates necessary to stabilize the climate system," and that the court retains jurisdiction to see that the state complied.[59] The Alaska Supreme Court declined to invoke the political question doctrine "because it requires a legislative policy judgment."[60] 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."[61]

In *Reynolds v. State of Florida,* the Florida Court of Appeals affirmed the dismissal of a lawsuit brought by eight young people alleging that the State of Florida, state officials, and state agencies violated their fundamental rights to a stable climate system under Florida common law and the Florida constitution.[62] The appellate court agreed with the lower court that the lawsuit raised nonjusticiable political questions.[63]

OTC has had slightly more success in Montana. In *Held v. State*,[64]a Montana district court concluded that the youth plaintiffs had standing for their claims and that the Montana State Energy Policy and the "Climate Change Exception" to the Montana Environmental Policy Act (MEPA)

---

[57] *Id.* at 1099.

[58] *Id.* at 1103 ("In short, we are not convinced that declaratory relief on the scope of the public trust doctrine, as requested in this case, will advance the plaintiffs' interests any more than it will shape the future conduct of the State.").

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

[60] *Id.* at 797.

[61] *Id.* at 799.

[62] Reynolds v. State of Florida, 2018 WL 3957180 (Fla. Dist. Ct. App.).

[63] *Id.*

[64] Held v. State of Montana, No. CDV-2020-307, http://climatecasechart.com/wp-content/uploads/sites/16/case-documents/2021/20210804_docket-CDV-2020-307_order.pdf.

violate Article II, § 31[65] and Article IV, § 1[66] of the Montana Constitution. In the landmark decision, *Montana Environmental Information Center v. Dep't of Envtl. Quality*,[67] the Montana Supreme Court held that citizens could challenge the constitutionality of statutory provisions that allowed an agency to bypass environmental review. In the Climate Change Exception, the legislature directed that environmental review under the *Montana Environmental Information Center* decision may not include "actual or potential impacts that are regional, national, or global in nature."[68] The court in *Held* found that the plaintiffs sufficiently alleged that their alleged harms were caused by carbon emissions for which the State defendants were responsible and that they had "sufficiently raised a factual dispute as to whether the State Energy Policy was a substantial factor in causing Youth Plaintiffs' injuries," and that the plaintiffs sufficiently alleged that actions pursuant to the Climate Change Exception implicated their right to a clean and healthful environment under the constitution.[69] The district court is expected to set a date for trial in the near future. This would be the first climate trial in the U.S.

## IV. CLIMATE LITIGATION ABROAD

Citizen plaintiffs have had considerably more success bringing actions to force stronger governmental action on climate mitigation and adaptation in other countries. The *Urgenda Foundation* climate case against the Dutch Government was the first in the world in which citizens established that

---

[65] Mont. Const. art. II, § 3 (The Montana Constitution states that "[a]ll persons . . . have certain inalienable rights. They include the right to a clean and healthful environment...").

[66] *Id.* at art. IV, § 1, subparagraph (1) (The Montana Constitution states that "[t]he State and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations." Additionally, under Article IV, § 1, subparagraph (3), "[t]he legislature shall provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.").

[67] Montana Environmental Information Center v. Department of Environmental Quality, 988 P.2d 1236 (Mont. 1999).

[68] MONT. CODE ANN. § 75-1-201(2)(a).

[69] Held v. State of Montana, No. CDV-2020-307, http://climatecasechart.com/wp-content/uploads/sites/16/case-documents/2021/20210804_docket-CDV-2020-307_order.pdf.

government has a legal duty to prevent dangerous climate change.[70] On December 20, 2019, the Supreme Court of the Netherlands upheld the lower courts' finding that the State of the Netherlands is legally obliged to reduce its greenhouse gas emissions by a minimum of 25 percent by the end of 2020 compared to 1990 levels. The Supreme Court's widely acclaimed decision is principally grounded in human rights law, with specific standards deduced from international climate change law and science. The Court ruled that the Dutch Government was in violation of its duty of care under the Dutch Civil Code by failing to protect human rights guaranteed under the European Convention on Human Rights (ECHR). Specifically, the judgment concerns the right to life under Article 2 of the ECHR and the right to respect for a person's private and family life under Article 8 of the ECHR.

The Court rejected the State's argument that unilateral reductions by the Netherlands would be inconsequential, finding that both Article 3(1) of the U.N. Framework Convention on Climate Change[71] and the "no harm principle"[72] of customary international law underpin the individual responsibility of states to take measures to address climate change, and held that "each country is responsible for its part and can therefore be called to account in that respect."[73]

Applying this precautionary principle, the Supreme Court reasoned that reliance on unproven technologies to extract carbon dioxide from the atmosphere as a substitute for mitigation was impermissible.[74] The Supreme Court found that relying on such technologies would involve "taking

---

[70] The State of the Netherlands v. Urgenda Foundation, The Supreme Court of the Netherlands (20 Dec. 2019), http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2020/20200113_2015-HAZA-C0900456689_judgment.pdf.

[71] United Nations Framework Convention on Climate Change, 9 May 1992, 1771 UNTS 107 (UNFCCC) art 2. (The objective of the UNFCCC is to stabilize greenhouse gas concentrations in the atmosphere "at a level that would prevent dangerous anthropogenic interference with the climate system.").

[72] IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW, 275–85, Oxford, (7th ed. 2008); PATRICIA BIRNIE, ALAN BOYLE, AND CATHERINE REDGWELL, INTERNATIONAL LAW AND THE ENVIRONMENT, 143-52, Oxford, (3rd ed. 2009).

[73] The State of the Netherlands v. Urgenda Foundation (2019), para 5.7.6.

[74] U.N. Conference on Environment and Development, *Rio Declaration on Environmental and* Development, U.N. Doc. A/CONF.151/26/Rev.1 (Vol.1), annex 1, Principle 19 (Aug. 12, 1992). (In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.).

irresponsible risks," which "would run counter to the precautionary principle."[75]

The Supreme Court also made a significant contribution to the development of the law of intergenerational rights by confirming that Article 3(1) of the UNFCCC—which recognizes both present and future generations as the beneficiaries of climate action under that treaty—is relevant to the interpretation of the ECHR.[76] This finding provides a steppingstone for future climate litigation aimed at advancing the rights of future generations.

Youth litigants in Germany have had even greater success. On April 29, 2021, the Federal Constitutional Court, Germany's highest court, handed down a landmark ruling that some aspects of the country's climate protection legislation are unconstitutional because they place too much of a burden for reducing greenhouse gas emissions on younger generations.[77] The Court struck down parts of Germany's 2019 Climate Change Act as incompatible with fundamental rights guaranteed under Article 2 of the Basic Law (Germany's constitution) for failing to set sufficient provisions for emission cuts beyond 2030.[78] The Court stated that "The statutory provisions on adjusting the reduction pathway for greenhouse gas emissions from 2031 onwards are not sufficient to ensure that the necessary transition to climate neutrality is achieved in time."[79] The Court adopted the principle of a "carbon budget" and said the legislature must design a plan to limit warming to well below two degrees Celsius and if possible to 1.5 degrees Celsius.[80] 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 CO2 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."[81]

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.[82] The cabinet approved measures

---

[75] The State of the Netherlands v. Urgenda Foundation (2019), para 7.2.5.

[76] *Id.*

[77] Neubauer, et al. v. Germany, GERMAN KLIMAKLAGE (Mar. 28, 2022), https://onlineacademiccommunity.uvic.ca/climatechangelitigation/2021/08/03/german-klimaklage-neubauer-et-al-v-germany/.

[78] *Id.*

[79] *See id.*

[80] *Id.*

[81] *See id*.

[82] *Factbox: German Government Agrees on Tougher Climate Targets*, REUTERS (May 12, 2021), https://www.reuters.com/business/environment/german-government-agrees-tougher-climate-targets-2021-05-12/.

stepping up the 2030 target for emission cuts to 65 from 55 percent, tougher emission budgets in all sectors, and new annual reduction targets for the 2030s.[83]

In France, the coastal municipality of Grande Synthe sued the French government for insufficient action on climate change in the *Conseil d'Etat*, the highest administrative court in France.[84] The suit alleged that the government's failure to aggressively reduce greenhouse gas emissions violates domestic and international law, including the European Convention on Human Rights, the Paris Agreement, the French Environmental Code, and the French Environmental Charter.[85] Noting that France committed itself to a 40% reduction in GHG emissions by 2030, compared to 1990 levels, and instructed the government to justify its ability to meet this goal without stricter measures.[86]

On July 1, 2021, the Conseil d'Etat ordered the government to "take all the measures necessary" by the end of March 2022 to bend the curve of greenhouse gas emissions to meet climate goals, including a 40% reduction by 2030.[87] The Court ruled that the emission reductions in 2019 and 2020 were not enough to ensure compliance with the required climate goals, and current climate regulations were insufficient to meet the target.[88]

The Macron government has introduced legislation in the French National Assembly proposing 60 measures to accelerate action on climate change, but no final action has been taken.[89] The Conseil d'Etat warned the government that failure to comply with the March deadline could result in penalties being assessed.[90] That would be a first in climate litigation.

## V. RESPONSIBILITIES OF PRIVATE CORPORATIONS TO THE PUBLIC GOOD

---

[83] *Id.*

[84] Commune de Grande-Synthe v. France, no. 427301 (2020), https://climaterightsdatabase.com/2020/11/19/commune-de-grande-synthe-v-france/.

[85] *Id.*

[86] *Id.*

[87] *Id.*

[88] *Id.*

[89] *Law No. 2019-1147 on Energy and the Climate*, GRANTHAM RESEARCH INSTITUTE ON CLIMATE CHANGE AND THE ENVIRONMENT (2019), https://climate-laws.org/geographies/france/laws/law-no-2019-1147-on-energy-and-the-climate.

[90] *Top Court Gives French Government Nine Months to Act on Climate Change*, REUTERS, July 1, 2021, https://www.reuters.com/business/environment/ top-court-gives-french-government-nine-months-act-climate-change-2021-07-01/.

Government alone cannot bring about the changes needed to transition the global economy to one that is carbon neutral, sustainable, and equitable. Achieving net-zero emissions by 2050 would entail a "fundamental transformation of the global economy," according to a recent study by McKinsey Consulting that will cost an extra $3.5 trillion a year.[91] That amounts to a 60% increase in today's level of investment and is equivalent to half of global corporate profits, a quarter of world tax revenue, and seven percent of household spending.[92] A further $1 trillion would also need to be reallocated from high-emission to low-carbon assets.[93] Although moving away from fossil fuels will cost 185 million jobs, the green economy will create 200 million new roles by 2050, including eight million in renewable power, hydrogen, and biofuels, the report says.[94]

The International Renewable Energy Agency estimates that the investment in clean energy will have to increase by thirty percent over current investment to a total of $131 trillion between now and 2050 with a cumulative payback of at least $61 trillion.[95] This will require dramatic adjustments in capital flows and a reorientation of investments to align energy with a positive economy and achieve climate goals.

The global movement towards Environmental, Social, and Governance (ESG) criteria within the private sector is a sign that things are changing but not at the scale or speed required. ESG criteria are a set of standards for a company's operations that socially conscious investors use to screen potential investments.[96] Environmental criteria consider how a company performs as a steward of natural resources.[97] Social criteria examine how it manages relationships with employees, suppliers, customers, and the communities where it operates.[98] Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights.[99]

---

[91] *The Economic Transformation: What Would Change in the Net-Zero Transition*, MCKINSEY SUSTAINABILITY (Jan. 25, 2022), https://www.mckinsey.com/business-functions/sustainability/our-insights/the-economic-transformation-what-would-change-in-the-net-zero-transition.

[92] *Id.*

[93] *Id*.

[94] *Id*.

[95] IRENA, WORLD ENERGY TRANSITIONS OUTLOOK: 1.5°C PATHWAY 28 (2021), file:///Users/samanthaarndt/Downloads/IRENA_World_Energy_Transitions_Outlook_2021.pdf.

[96] The Investopedia Team, *Environmental, Social, and Governance (ESG) Criteria*, INVESTOPEDIA (Feb. 23, 2022), https://www.investopedia.com/terms/e/environmental-social-and-governance-esg-criteria.asp.

[97] *Id*.

[98] *Id*.

[99] *Id*.

There are many examples of responsible corporate behavior under the ESG banner.[100] But there are also many examples of "greenwashing" which refers to false, misleading, or exaggerated environmental claims in advertising. Over the past few years, a growing form of greenwashing has been through carbon offset and net-zero commitments by corporations who are financing renewable energy projects.[101]

Research conducted by the UCLA Institute of the Environment and Sustainability shows that green advertising has nearly tripled since 2006.[102] As of 2009, three quarters of S&P 500 companies have been disclosing their environmental and social policies and performance on their websites.[103] Over 95 percent of products surveyed by TerraChoice in 2008 and 2009 committed at least one of the TerraChoice "Seven Sins of Greenwashing."[104]

Several large companies have vowed to achieve net-zero emissions in the coming decades. But some of the world's best-known corporations have not done enough to honor their climate commitments, according to the New Climate Institute, an independent climate advocacy organization based in Germany, that looked at the plans of twenty-five corporations that have pledged to reach net-zero.[105] It found that on average, existing plans would reduce emissions by about 40 percent — and a significant portion of those reductions would not come until the tail end of the companies' self-imposed deadlines.[106] "Eight of the companies also excluded scope 3 emissions, which include the emissions created when their products are used, such as when drivers burn gasoline.[107] Scope 3 emissions typically account for more than

---

[100] *See generally* MICHAEL P. VANDENBERG & JONATHAN M GILLIGAN, BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE (2017).

[101] THE SOCIAL INVESTMENT FORUM, 2010 REPORT OF SOCIALLY RESPONSIBLE INVESTING TRENDS IN THE UNITED STATES (Greenmoney30, 2010), https://greenmoney.com/the-2010-report-on-socially-responsible-investing-trends-in-the-united-states/.

[102] At the UCLA Institute of the Environmentgat(2011), https://www0.gsb.columbia.edu/mygsb/faculty/research/pubfiles/14016/cmr5401_04_printversion_delmasburbano.pdf.

[103] *Id*.

[104] TERRACHOICE ENVIRONMENTAL MARKETING, THE SEVEN SINS OF GREENWASHING (TerraChoice Group Inc., 2009).

[105] THOMAS DAY ET AL., CORPORATE CLIMATE RESPONSIBILITY MONITOR 2022 5 (New Climate Institute 2022).

[106] *Id*.

[107] Maxine Joselow, *E.U.-U.S. Meeting Today has big Implications for Climate, Energy*, WASH. POST (Feb. 7, 2022), https://www.washingtonpost.com/politics/2022/02/07/eu-us-meeting-today-has-big-implications-climate-energy/.

70% of corporate emissions, according to MSCI, a financial information firm."[108]

The study by the New Climate Institute showed that "none of the companies in the MSCI study received the top ranking of 'high integrity.' Well-known companies like Apple, Sony, and Vodafone were ranked in the second tier and a dozen others were rated 'very low integrity, meaning their plans to reach net-zero on deadline were not trustworthy."[109]

Regulators in the EU and US are taking action to control greenwashing through stricter disclosure requirements on climate risks and ESG claims. In 2020, the European Commission published the Sustainable Finance Taxonomy Regulation also known as the Green Taxonomy Rule.[110] The EU taxonomy is a classification system that establishes a list of environmentally sustainable economic activities.[111] It establishes several environmental objectives including climate mitigation, adaptation, and conservation of biodiversity.[112]

The European Commission has also adopted the sustainability-related disclosure in the financial services sector governing the disclosure obligations for manufacturers of financial products and financial advisers towards end investors.[113] It covers financial market participants (i.e. asset managers, institutional investors, insurance companies, pension funds, etc., all entities offering financial products where they manage clients' money) and financial advisers in all investment processes and for financial products that pursue the objective of sustainable investment.[114]

In the United States, the Federal Trade Commission has adopted the "Green Guides." The Green Guides were first issued in 1992 and were revised in 1996, 1998, and 2012.[115] They include: "1) general principles that apply to all environmental marketing claims; 2) how consumers are likely to interpret particular claims and how marketers can substantiate these claims;

---

[108] *Id*.

[109] *Id*.

[110] *EU Taxonomy for Sustainable Activities*, EUROPEAN COMMISSION, https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en (last visited Mar. 31, 2022).

[111] *Id*.

[112] *Id*.

[113] *Sustainability-Related Disclosure in the Financial Services Sector*, EUROPEAN COMMISSION, https://ec.europa.eu/info/business-economyeuro/banking-and-finance/sustainable-finance/sustainability-related-disclosure-financial-services-sector_en (last visited Mar. 31, 2022).

[114] *Id*.

[115] FED. TRADE COMM'N, ENVIRONMENTALLY FRIENDLY PRODUCTS: FTC'S GREEN GUIDES, https://www.ftc.gov/news-events/topics/truth-advertising/green-guides (Last visited Mar. 31, 2022).

and 3) how marketers can qualify their claims to avoid deceiving consumers."[116] The Green Guides warns marketers against making broad and unqualified environmental claims.[117] The Green Guides also reiterate general truth-in-advertising standards, including taking pains to ensure that the basis for any comparative claim is clear and substantiated.[118]

The Securities and Exchange Commission (SEC) first published "guidance" in 2010, on what publicly traded companies need to disclose to investors in terms of climate-related "material" effects on business operations, whether from new emissions management policies, the physical impacts of changing weather or business opportunities associated with the growing clean energy economy.[119] This guidance did not have much impact on corporate disclosures.[120] More recently the SEC has announced that it will propose a rule to require climate-related disclosures in public filings and that the proposal will likely be made before the end of 2020.[121]

A key consideration for the SEC will be the extent to which assurance, in line with internationally recognized standards, will be required in relation to mandatory climate disclosures in the U.S. Specifically, the SEC will have to address whether climate-related disclosures will need to be evaluated and assured by third parties in some manner similar to the assurances made for corporate financial reporting. In any event, assurance may come to be considered a preferred/recommended practice.

The courts are also being brought into the picture. Building on the successful *Urgenda Foundation* case, Milieudefensie/Friends of the Earth

---

[116] *Id*.

[117] *Id*.

[118] *Id*.

[119] GARY SHORTER, SEC CLIMATE CHANGE DISCLOSURE GUIDANCE: AN OVERVIEW AND CONGRESSIONAL CONCERNS 1 (Congressional Research Service 2013) ("A report from the law firm of Davis Polk & Wardwell found that the Guidance did not appear to have had as significant an impact on disclosure as some had expected; that new disclosures emerged involving potential changes in demand for products and services and increases in fuel prices; and that there was little disclosure of actual or potential reputational harm that might result from climate change.").

[120] *Id.* at 7.

[121] Chair Gary Gensler, *Testimony Before the United States Senate Committee on Banking, Housing, and Urban Affairs*, U.S. SECURITIES & EXCHANGE COMMISSION (Sept. 14, 2021), https://www.sec.gov/news/testimony/gensler-2021-09-14 ("Today's investors are looking for consistent, comparable, and decision-useful disclosures around climate risk, human capital, and cybersecurity. I've asked staff to develop proposals for the Commission's consideration on these potential disclosures").

Netherlands and co-plaintiffs sued Royal Dutch Shell in the Hague District Court alleging violations of its duty of care under Dutch law and human rights obligations.[122] On May 26, 2021, the court issued a blockbuster decision ordering Shell to reduce its total CO2 emissions by 45% by 2030 compared to 2019 levels.[123] This target is in line with United Nations guidance for member states aimed at preventing global temperatures from rising more than 1.5 degrees Celsius above preindustrial levels.[124] This is the first time in history that a court has ordered a private company to achieve emission reductions that will require fundamental changes in its business model.[125] Notably, the court held Shell responsible for the direct emissions from its operations (scope 1), its suppliers (scope 2), and its customers (scope 3) which account for 79% of total emissions.[126] Acknowledging that the decision would have "far reaching consequences" for Shell and "require an adjustment of the Shell group's energy package" the court nonetheless concluded that the public interest in preventing dangerous climate change "outweighs the Shell group's commercial interests."[127]

The court held that Shell owes an "obligation of result" to reduce CO2 emissions generated worldwide by its group's operations (i.e., an obligation to ensure that the emission reduction is achieved to the level specified by the court) and a "significant best-efforts obligation" to reduce CO2 emissions generated worldwide by its business partners, including suppliers and end-users (i.e., an obligation to take necessary steps to remove serious risks and limit any lasting consequences to the best of its abilities).[128] In response to

---

[122] MILIEUDEFENSIE ET AL. V. ROYAL DUTCH SHELL PLC., CLIMATECASECHART.COM, http://climatecasechart.com/climate-change-litigation/non-us-case/milieudefensie-et-al-v-royal-dutch-shell-plc/ (last visited Mar. 31, 2022).

[123] *Id*.

[124] German Klimaklage (Neubauer, et al. v. Germany), ONLINEACADEMIC COMMUNITY.UVIC.CA (Mar. 28, 2022), https://onlineacademiccommunity.uvic.ca/climatechangelitigation/2021/08/03/german-klimaklage-neubauer-et-al-v-germany/.

[125] Melanie Gillis & Daniel Vanclieaf, *Dutch Court Orders Corporation to Reduce Emissions in Landmark Decision*, MCINNES COOPER (July 22, 2021), https://www.mcinnescooper.com/publications/dutch-court-orders-corporation-to-reduce-emissions-in-landmark-decision/.

[126] MILIEUDEFENSIE ET AL. V. ROYAL DUTCH SHELL PLC*., supra* note 123.

[127] *Id.*

[128] *Id.*

the judgment, Shell has pledged to accelerate its plans to reduce emissions, maintaining, however, that it will continue to produce fossil fuels.[129]

The decision does not impose any fines or civil damages on Shell, though these may follow if Shell fails to comply with its reduction obligation. Shell has announced its intent to appeal the ruling to The Hague Court of Appeal, whose rulings are in turn reviewable by the Dutch Supreme Court.[130] However, the district court decision is provisionally enforceable, meaning Shell must immediately start reducing emissions pending a final decision on appeal.

Big energy firms are coming under increasing pressure from shareholders to adjust to a lower-carbon world. Engine No. 1, a tiny hedge fund that manages just $250 million in assets and owns a meager 0.02% of ExxonMobil stock managed to get two of its nominees elected to the company's board on May 26, 2021, over management's objections.[131] A third shareholder was declared elected a week later.[132]

Shareholders of the oil and gas giant Total voted overwhelmingly in favor of rebranding the company as TotalEnergies as it shifts some of its focus towards renewable energy sources.[133] BP PLC pledged to reduce its net carbon emissions to zero by 2050, and restructure its oil-focused businesses to navigate a transition to other fuels, amid investor and customer demands.[134] But, like so many of the carbon majors, it doesn't spell out how this will be accomplished. In general, European energy firms have moved

---

[129] *Shell Confirms Decision to Appeal Court Ruling in Netherlands's Climate Case*, SHELL (Jul. 20, 2021), https://www.shell.com/media/news-and-media-releases/2021/shell-confirms-decision-to-appeal-court-ruling-in-netherlands-climate-case.html.

[130] *Id.*

[131] Matt Phillips, *Exxon's Board Defeat Signals the Rise of Social-Good Activists*, N.Y. TIMES (June 9, 2021), https://www.nytimes.com/2021/06/09/business/exxon-mobil-engine-no1-activist.html.

[132] *Id.*

[133] Sarah White & Benjamin Mallett, *We're TotalEnergies: French Oil Major Gets Green Rebrand*, REUTERS (May 28, 2021), https://www.reuters.com/business/sustainable-business/total-shareholders-back-rebrand-totalenergies-ceo-2021-05-28/.

[134] David Hodari, *BP Wants to Become Carbon Neutral by 2050, but Doesn't Say How,* THE WALL ST. J. (Feb. 12, 2020), https://www.wsj.com/articles/bp-wants-to-be-carbon-neutral-by-2050-11581517147.

more quickly than their U.S. counterparts to begin the transition away from fossil fuels according to Carbon Tracker.[135]

Despite the PR, it is a fair bet that more litigation to hold companies accountable to their promises is in the offing.

## VI. CONCLUSION

The earth is entering a new epoch – the "Anthropocene" – or the age of human domination of the planet.[136] The relatively stable climate of the Holocene that has lasted for over 11,000 years and allowed human civilization to flourish is over.[137] Humans now consume one-quarter to one-third of net primary production – the measure of how much carbon is stored by photosynthesis - on earth. The pollution caused by human activities, in particular carbon and nitrogen pollution, is exceeding planetary boundaries according to scientists at the Stockholm Institute.[138] The existential threat to human wellbeing is real.

A stable climate is clearly a global public good, and so is the conservation of the earth's endangered biological diversity. The two are intertwined. The means to avoid the looming catastrophe facing large segments of the global population are at hand. The technologies and money to accelerate the transition to a carbon-neutral, sustainable economy are at hand and more are in development. But the clock is ticking, the climate waits for no one, and the nations of the world have already squandered too much time in endless debates about what to do and who goes first. The private sector is making some progress, but the fossil fuel industry and the Petro-states still control the levers of power.

Environmental law in the United States is outdated, moribund, and incapable of dealing with these profoundly wicked problems. Our conservative Supreme Court, with its textualist approach to statutory interpretation, makes it hard for agencies like the EPA to respond to new threats that were not recognized when laws like the Clean Air Act were originally passed decades ago. In general, our courts have shown little appetite for exercising their equitable powers to hold government and corporations accountable for their actions and inactions, choosing instead to retreat behind the wall of separation of powers in the mistaken and naïve view that the fate of humanity is a "political question," notwithstanding the

---

[135] *Fault Lines: How diverging oil and Gas Company Strategies Link to Stranded Asset Risk*, CARBON TRACKER (Oct. 9, 2020), https://carbontracker.org/reports/fault-lines-stranded-asset/.

[136] *Four of Nine 'Planetary Boundaries' Exceeded,* EUROPEAN COMMISSION (Apr. 16, 2015), https://ec.europa.eu/environment/integration/research/newsalert/pdf/four_out_of_nine_planetary_boundaries_exceeded_410na1_en.pdf.

[137] *Id.*

[138] *Id*.

obvious fact that at least in the United States our democracy is teetering, and our politics are taking us down a path of destruction.

One can only resist the temptation to declare that all is lost and keep plugging away at the solutions that are hidden in plain sight while hoping that this can be turned around in time to avoid the worst outcomes.