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The Public Trust Doctrine Fifty Years After Sax and Some Thoughts on Its Future

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**THE PUBLIC TRUST DOCTRINE FIFTY YEARS AFTER SAX
AND SOME THOUGHTS ON ITS FUTURE**

Michael C. Blumm* & Zachary A. Schwartz**

The public trust doctrine was resurrected by Professor Joe Sax in a now famous article a half-century ago. Sax explored the doctrine's history and maintained that it had contemporary significance at the dawn of the modern environmental movement in 1970. Sax thought that the historic use of the doctrine to prevent monopoly use of important waterways could be expanded to meet the necessities of the times by protecting important natural resources from unwise or unsustainable depletion for public use, including use by future generations. His vision ignited a substantial expansion in the scope and purposes of the doctrine over the past 50 years. Some of the most surprising developments have occurred internationally, which Sax's article did not expressly anticipate.

This analysis, written on the 50th anniversary of Sax's article, examines the public trust doctrine both before and after the article, revealing the considerable effect it has had on courts and legislatures. In addition to suggesting the great debt public trust scholars and the public at large owe to Sax's prescience, this article hazards some predictions about the likely evolution of the doctrine in the future.

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I. INTRODUCTION

The public trust doctrine (PTD) was practically reinvented a half-century ago by Professor Joseph Sax in his famous article.¹ Although the doctrine has been implicit in sovereignty at least since the Roman Empire,² Sax resurrected the public rights it recognized at the dawn of the modern environmental law era.³ He also presciently observed that trust resources, traditionally interpreted to center on navigable waters to promote public water-borne commerce and fishing, need not be confined to those waterbodies, but could be invoked to apply to wetlands, upland resources,

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1. Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970). Sax's article has been cited by 47 cases and over 1,100 articles, according to a search on HeinOnline, last accessed March 31, 2020.

2. See *infra* notes 27–39 and accompanying text (discussing the Roman and English origins of the PTD).

3. See generally RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 29–42 (2004) (explaining the emergence of federal environmental law in the 1970s).

and even the atmosphere.⁴ Sax unearthed the Supreme Court's 1892 decision in *Illinois Central Railroad v. Illinois* as the lodestar case recognizing the PTD's potency as a restraint against government perfidy.⁵

But Sax's treatment of the PTD largely overlooked the great expansion of the doctrine's scope that took place during the late 19th century, as the Supreme Court approved lower courts' expanded definition of "navigable waters" that included inland waterways that were in fact navigable, not just tidal waters as had been the case in England.⁶ This 19th century expansion is an important part of the PTD's history in an era in which some commentators aimed to confine the scope of the doctrine to what they perceived to be its inherent limits.⁷ Sax's article also did not call attention to the beginning of the PTD's evolution beyond navigable waters entirely to include non-navigable waters whose bedlands were privately owned. This evolution also began in the 19th century and became quite pronounced in the 20th century.⁸

Although Sax overlooked some of the great expansion of the PTD that occurred in the 19th and early 20th centuries, in the half-century that followed his article, the PTD fulfilled many of his predictions and more. Beginning shortly after 1970, the doctrine gave the public the right to protect the ecological and recreational value of tidelands in California;⁹ recognized public rights to recreate on ocean beaches in New Jersey;¹⁰ required evaluation of ecological considerations in the administration of

4. Sax, *supra* note 1, at 556–57 (“Thus, . . . protections which the courts have applied in conventional public trust cases would be equally applicable and equally appropriate in controversies involving air pollution, the dissemination of pesticides, the locations of rights of way for utilities, and strip mining or wetland filling on private lands in a state where governmental permits are required.”).

5. Sax, *supra* note 1, at 489–91.

6. See *infra* notes 44–53 and accompanying text (discussing the expansion of the American PTD in the 19th century).

7. See, e.g., James L. Huffman, *Why Liberating the Public Trust Doctrine is Bad for the Public*, 45 ENVTL. L. 337, 340 (2015) (“Sax’s invitation to liberate the public trust doctrine from its historical shackles—so enthusiastically embraced by many in the academy—has been largely rejected by the courts.”).

8. See *infra* notes 75–87 and accompanying text (discussing the expansion of the PTD beyond title navigability); see also 2 WATERS AND WATER RIGHTS, § 32.03(a)(1) (Amy K. Kelly ed. 3rd ed. 2018) (discussing the so-called “pleasure boat” test for navigability).

9. *Marks v. Whitney*, 491 P.2d 374 (Cal. 1971); see *infra* note 21.

10. *Raleigh Ave. Beach Ass’n v. Atlantis Beach Club, Inc.*, 879 A.2d 112 (N.J. 2005) (applying the PTD to ensure public use of a private beach, applying the factors established by *Matthews v. Bay Head Improvement Ass’n*, 471 A.2d 355 (N.J. 1984); see *infra* notes 156–72 and accompanying text (discussing New Jersey’s application of the PTD to beaches).

water rights in California;¹¹ gave trust protection to groundwater in Hawaii;¹² was construed to be implicit in the federal due process clause in an atmospheric trust case;¹³ and gave implementation force to an international treaty on climate.¹⁴ Several of these developments were beyond the Saxion vision a half-century ago.¹⁵

At the time of Sax's article—coinciding with the beginning of the modern environmental law¹⁶—courts had recognized public rights to access and protect navigable waters, but had yet to devote attention to the *Illinois Central* Court's recognition that the doctrine's application could extend to all natural resources “in which the whole people are interested” or which are the “subject of public concern to the whole people of the state.”¹⁷ Sax made that oversight apparent,¹⁸ and the scope of resources subject to the PTD has expanded ever since.¹⁹

Courts' recognition of the purposes served by the PTD were also in transition when Sax wrote. In a case ongoing at the time of his article,²⁰ the California Supreme Court eventually ruled that the PTD included

11. Nat'l Audubon Soc'y v. Super. Ct. of Alpine Cty., 658 P.2d 709 (Cal. 1983) (“*Mono Lake*”); see *infra* notes 173–86 and accompanying text (discussing the *Mono Lake* decision).

12. In re Water Use Permit Applications, 9 P.3d 409 (Haw. 2000) (“*Waiahole Ditch*”); see *infra* notes 188–209 and accompanying text (discussing the *Waiahole Ditch* decision).

13. Juliana v. United States, 217 F. Supp. 3d 1224 (D. Or. 2016), *overruled on standing grounds by* Juliana v. United States, 947 F.3d 1159 (9th Cir. 2020); see *infra* notes 218–31 (discussing American atmospheric trust litigation).

14. The State of the Netherlands v. Urgenda Foundation, Supreme Court of the Netherlands, ECLI:NL:PHR:2019:102 (2019) (“*Supreme Court Decision*”), *aff'g* State of the Netherlands v. Urgenda Foundation, Hague Court of Appeals, ECLI:NL:RBDHA:2015:7196 (2018) (“*Court of Appeals Decision*”); see *supra* notes 262–68 and accompanying text.

15. See 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. DAVIS L. REV. 741, 750–56 (2012).

16. But certainly not the origin of environmental law, which arguably existed as early as the 1880s. See KARL BOYD BROOKS, *BEFORE EARTH DAY: THE ORIGINS OF AMERICAN ENVIRONMENTAL LAW, 1945–70* (2009), reviewed in Michael C. Blumm, *Debunking the “Divine Conception” Myth: Environmental Law Before NEPA*, 37 ECOLOGY L.Q. 269 (2010).

17. Ill. Central R.R. Co. v. Illinois, 146 U.S. 387, 453, 455–56 (1892).

18. Sax, *supra* note 1, at 556–57.

19. See *infra* notes 156–281 and accompanying text.

20. Sax, *supra* note 1, at 530–31 (mentioning lower court's decision in *Marks*).

protection of recreational and ecological resources.²¹ Soon other courts would see that the PTD was more than a public access right to trust resources but also a vehicle to protect those resources for future generations.²² The libertarian-minded scholars condemned this judicial evolution as unwarranted judicial activism.²³

In the last several years, the PTD's reach has extended internationally, with groundbreaking decisions in India, the Philippines, Pakistan, Colombia, and the Netherlands, among other countries.²⁴ A number of decisions, both domestic and international, have located the public trust in constitutions,²⁵ giving it a firm legal foothold. Perhaps the most arresting PTD decisions are those concerning its implications for governmental failures to combat climate change.²⁶

This article surveys the PTD both before and since Professor Sax's article a half-century ago. Section I provides a brief overview of the origins of the doctrine, on which there has been some important new scholarship concerning its Roman roots. Section II explains the growth of public rights in navigable waters in 19th and early 20th century America, to which the Sax article gave only passing attention. Section II also examines the Supreme Court's *Illinois Central* decision, considered by Sax to be the doctrine's "lodestar," but also discusses the public trust in wildlife and the extension of the PTD to non-navigable waters, both well underway by 1970. Section III turns to Sax's article, which gave the doctrine its name and made several other notable contributions. Section IV explores the growth of the PTD during the last half-century, focusing especially on the entrenching of the doctrine in domestic and international constitutions. The article concludes with some predictions about the PTD's evolution during the next half-century.

21. *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971) ("There is a growing public recognition that one of the most important public uses of the tidelands—a use encompassed within the tidelands trust—is the preservation of those lands in their natural state, so that they may serve as ecological units for scientific study.").

22. See *infra* notes 222–42 and accompanying text.

23. See, e.g., James L. Huffman, *Speaking of Inconvenient Truths—A History of the Public Trust Doctrine*, 18 DUKE ENVTL L. & POL'Y F. 1, 3 (2007); Huffman, *supra* note 7, at 339.

24. See *infra* notes 244–91 and accompanying text.

25. See *infra* notes 156–295 and accompanying text.

26. See *infra* notes 222–43 and accompanying text.

II. ROMAN AND ENGLISH ORIGINS

PTD critics have questioned the Saxion claim of the Roman origins of the doctrine, apparently in the belief that if its Roman roots were not genuine, the PTD could be exposed as an illegitimate threat to private property rights.²⁷ The arguments of these critics have been undermined by two analyses of Roman law published in the last year, which suggest that the language of the *Institutes of Justinian* (promulgated in A.D. 533) that Sax referenced,²⁸ was merely a codification of earlier Roman law, deriving from earlier treatises by Roman jurists Gaius (circa A.D. 160), Ulpian (circa A.D. 170–223), and Marcian (circa A.D. 220–230).²⁹

Hundreds of years before Justinian, Roman law recognized shorelands as public property, although the law tolerated private villas, which did not have the right to exclude fishers from accessing the sea.³⁰ Ulpian, in particular, recognized that the sea and the shore “are the common property of everyone, like the air; . . . [and] no one can be prohibiting from fishing.”³¹ Thus, the recognition of *res communes* central to the Justinian legacy turns out to be firmly established hundreds of years earlier. Although it is not clear whether the Romans divided ownership between trustees and beneficiaries, Roman law did recognize the state’s reversionary interest in the private villas on the shore.³²

27. See, e.g., Huffman, *supra* note 23, at 12–19 (2007) (relying mainly on two articles to discount the Roman origins of the PTD: Glenn J. McGrady, *The Navigability Concept in Civil and Common Law: Historical Development, Current Importance, and Some Doctrines That Don’t Hold Water*, 3 FLA. ST. U. L. REV. 511 (1975); Patrick Deveney, *Title, Jus Publicum, and the Public Trust: An Historical Analysis*, 1 SEA GRANT L.J. 13 (1976)).

28. The passage from the *Institutes of Justinian* 2.1.1 (Thomas Cooper trans & ed. 1841), known as the *res communes omnium* (“things common to all”), reads: “these things are by natural law common to all: air, flowing water, the sea, and consequently the shores of the sea.” Sax referenced the passage in his article. Sax, *supra* note 1, at 474 n.15.

29. Bruce W. Frier, *The Roman Origins of the Public Trust Doctrine*, 32 J. ROMAN ARCHAEOLOGY 641, 642–43, 646 (2019); J.B. Ruhl & Thomas A.J. McGinn, *The Roman Public Trust Doctrine: What Was It, and Does It Support an Atmospheric Trust?*, 47 ECOLOGY L.Q. 117 (2020). After providing some context for the Justinian passage, *supra* note 28, Ruhl and McGinn observe that although the *Institutes* were “firmly within the core body of Roman law,” they were hardly an effort to create new law, instead being a synthesis of Roman law going back centuries in an effort to remove inconsistencies and obsolete principles. *Id.* at 130.

30. Frier, *supra* note 29, at 645–46.

31. *Id.* at 646.

32. *Id.* at 647.

Later, in the 14th and 15th centuries, Venetian legal scholars erected a claim of prescription unrecognized in Roman law as a defense to the city's claim of ownership of lagoons in the Adriatic Sea on which the city was built.³³ But the Dutch jurist Hugo Grotius, in his 1609 treatise *Mare Liberum*, invoked Justinian's *res communes* to refute Portuguese and Spanish claims of ownership of the sea and to justify freedom of the seas.³⁴

Meanwhile, in England, the Magna Charta had recognized public rights in what came to be called "navigable waters" in 1215, and a few years later an amendment known as the Forest Charter recognized public rights in royal forests.³⁵ However, the predecessor most responsible for transporting the PTD across the Atlantic was Lord Mathew Hale, a distinguished jurist and Chief Justice of the King's Bench, who wrote *De Jure Maris*, which was not published until 1787, over a century after Hale authored it.³⁶ Like the Roman concept of *res communes*, Hale interpreted the Magna Charta to recognize public rights to fish in waterways that were "common highways."³⁷ Private shoreland owners had no right to exclude the public from such waterways; instead, the King had jurisdiction, to be exercised "not primarily for his profit, but for protection of the people and promotion of the general welfare."³⁸ Hale thus introduced the role of the sovereign as trustee over waterways that were common resources.³⁹

33. See Ruhl & McGinn, *supra* note 29, at 147.

34. See *id.* at 149 ("Grotius deploys the evidence of Latin literature, especially the work of Cicero and Seneca, to argue that the sea, or at least large stretches of it, cannot be owned, but must remain accessible to use by all as provided by nature."). The article proceeds to analyze at some length scholarship on the *res communes* concept, focusing on late 19th and early 20th century interpretations of the writings of Marcian and Ulpian and concluding that the inclusion of air in *res communes* was likely a reflection of the economic importance of bird-catching. *Id.* at 149–158.

35. See Michael C. Blumm & Courtney Engel, *Proprietary and Sovereign Public Trust Obligations: From Justinian and Hale to Lamprey and Oswego Lake*, 43 VT. L. REV. 1, 6–9 (2018) (pointing out that these fishing and navigation rights benefited commoners, unlike most of the other provisions of Magna Charta, which largely benefited the nobility). On the Forest Charter, see Daniel Magraw & Natalie Thomure, *Carta de Foresta: The Charter of the Forest Turns 800*, 47 ENVTL. L. REP. NEWS & ANALYSIS 10,934 (2017).

36. See Blumm & Engle, *supra* note 35, at 8 n.40.

37. LORD CHIEF-JUSTICE MATHEW HALE, A TREATISE IN THREE PARTS, IN A COLLECTION OF TRACTS RELATED TO THE LAW OF ENGLAND 9, 21–22 (Francis Hargrave ed., T. Wright 1787). These waterways came to be known as navigable waters in the wake of *The River Banne* decision, 80 Eng. Rep. 540 (K.B. 1611), although there is some dispute over whether U.S. courts correctly interpreted the decision. See Blumm & Engle, *supra* note 35, at 7 n.34, 9 n.41.

38. *Id.* at 6.

39. *Id.* Allowing the waterbody to be the subject of private claims of ownership could allow monopolization of the resource on which "the whole people"

III. THE PTD BEFORE SAX

American courts recognized the American PTD before Sax wrote, beginning early in the 19th century, if not before. The foundation cases involved disputes over oyster harvests on the Raritan River (named after a local Algonquian tribe), which flows in central New Jersey east into Raritan Bay, near Staten Island. A half-century later, the Supreme Court recognized the inalienability of public trust resources in a case that Sax made the centerpiece of his analysis.⁴⁰ Ensuing Supreme Court opinions quickly distinguished the *jus publicum* from the *jus privatum* at the core of the PTD⁴¹ and applied the sovereign ownership doctrine to wildlife.⁴² Simultaneously, state courts began to recognize public rights in trust resources and for trust purposes far beyond the public rights recognized in the federal title cases.⁴³ This section discusses these developments.

A. *The Dawn of the American PTD*

Hale proved quite influential in American courts. For example, in an 1805 case substantially reinterpreting the meaning of riparian water rights, Chief Justice James Kent cited Hale's treatise in concluding that both freshwater and tidal waters were under "the servitude of the public interest, and may be of common or public use . . . as common highways by water."⁴⁴ Several decades later, the Supreme Court referenced Hale in a landmark case upholding state regulation of rates charged by grain

depended for transport, fishing, and commerce. *See supra* text accompanying note 17 (discussion of *Illinois Central*). Antimonopoly was and is a prime goal of the PTD. *See* Michael C. Blumm & Aurora Paulsen Moses, *The Public Trust as an Antimonopoly Doctrine*, 34 B.C. ENVTL. AFFAIRS L. REV. 1 (2017).

40. Ill. Central R.R. Co. v. Illinois, 146 U.S. 387, 453 (1892); *see infra* notes 54–65 and accompanying text.

41. *Shively v. Bowlby*, 152 U.S. 1, 13 (1894) ("this title, *jus privatum*, whether in the king or in a subject, is held subject to the public right, *jus publicum*, of navigation and fishing"); *see infra* notes 66–69 and accompanying text.

42. *Geer v. Connecticut*, 161 U.S. 519, 534 (1896); *see infra* notes 70–74 and accompanying text (discussing *Geer*).

43. *See, e.g., Lamprey v. Metcalf*, 53 N.W. 1139, 1143 (Minn. 1893) (expanding the scope of the PTD to recreational uses); *see infra* notes 75–85 and accompanying text (discussing *Lamprey*).

44. *Palmer v. Mulligan*, 3 Cai. R. 307, 319 (N.Y. Sup. Ct. 1805) (reinterpreting riparian rights to permit reasonable uses, discounting interferences with "natural flow"); *see* MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1780–1860*, at 37–38 (1977) (discussing the significance of *Palmer v. Mulligan* in transforming water law).

elevators operating as adjuncts to railroads because they were “affected with a public interest.”⁴⁵

Hale’s influence was most apparent in the foundation PTD case of *Arnold v. Mundy*. In *Arnold*, Justice Andrew Kirkpatrick of the New Jersey Supreme Court ruled that Benajah Mundy and other oyster harvesters could exercise public rights to harvest in the tidal Raritan River despite adjacent landowner Robert Arnold’s claimed right to exclude them because ownership of adjacent lands did not include the bed of the river.⁴⁶ Kirkpatrick quoted Hale to the effect that “the common people of England have regularly a liberty of fishing . . . as a public common piscary,” which could not be denied by monopolistic landowners.⁴⁷

Kirkpatrick’s decision in *Arnold* was collaterally attacked in a case that reached the U.S. Supreme Court involving another oyster harvesting conflict on the very same Raritan River. The landowner succeeded in the lower federal court, but the Supreme Court reversed in *Martin v. Waddell’s Lessee*.⁴⁸ Chief Justice Taney not only endorsed Kirkpatrick’s reasoning in *Arnold* as “unquestionably entitled to great weight,” he relied on Hale for the proposition that “the common people”

45. *Munn v. Illinois*, 94 U.S. 113, 126 (1876). The grain elevators functioned as common carriers, obliged to take all grain tendered to them by the railroads, and offering their services to the public at a fixed price. See Edmund W. Kitch & Clara Ann Bowler, *The Facts of Munn v. Illinois*, 1978 SUP. CT. REV. 313 (1978). The phrase “affected with a public interest” is one which the *Illinois Central* Court would echo, see *infra* notes 54–65 and accompanying text.

46. *Arnold v. Mundy*, 6 N.J.L. 1, 42 (1821). J.B. Ruhl and Thomas McGinn unearthed an earlier PTD decision, *Harrison v. Starrett*, 4 H. & McH. 540, 545, 548 (1774), concerning Sterrett’s large fill in Maryland’s Patapsco River, which interfered with the vessel traffic of his neighbor. After proclaiming the superiority of public rivers in the river and citing Justinian, the provincial court denied Harrison relief due to a failure to show “special injury” necessary to pursue a public nuisance case. See Ruhl & McGinn, *supra* note 29, at 134–35. An early PTD case that did award injunctive relief was *Carson v. Blazer*, 2 Binn. 475, 478 (Pa. 1810), concerning Pennsylvania’s Susquehanna River, in which the state supreme court announced that a shoreland landowner had “no exclusive right to fish in the river immediately in front of his lands [because] the right to fisheries [in tidal rivers] is vested in the state, and open to all.” But it was *Arnold v. Mundy*, which the U.S. Supreme Court later endorsed. See *infra* notes 47–50 and accompanying text.

47. *Arnold*, 6 N.J.L. at 74. Kirkpatrick supplied some updating to Hale’s Old English language. See Blumm & Engle, *supra* note 35, at 10 n.49. Laying the foundation for the modern PTD, Hale interpreted the Magna Charta to ensure landowners had no “privilege or prerogative” over a river on which the whole people depended; moreover, the king’s jurisdiction over a waterway was “not primarily for his profit, but for the protection of the people and the promotion of the general welfare.” Hale, *supra* note 37, at 6.

48. 41 U.S. 367 (1842).

have “a liberty of fishing in the sea, creeks, or arms thereof, as a public common of piscary.”⁴⁹ Taney announced that the Raritan River was “held as a *public trust* for the benefit of the whole community, to be freely used by all for navigation and fishery.”⁵⁰ Professor Sax may have invented the term “public trust doctrine,” but the Supreme Court recognized the doctrine over a century before his article.

B. Expanding the Geographic Scope of the PTD in the 19th Century

The PTD the Supreme Court ratified in *Martin v. Waddell* might have been interpreted to be confined only to original states like New Jersey with royal grants, but within three years the Supreme Court expanded the scope of public rights in navigable waters to all states under the so-called “equal footing doctrine.”⁵¹ Consequently, by the mid-19th century the Court had significantly expanded the scope of public rights in navigable waters and their submerged lands.

Before long, the Court expanded the definition of navigable waters beyond tidal waters to include inland waterways that were navigable-in-fact, first in federal admiralty jurisdiction,⁵² and then to state proprietary ownership.⁵³ By 1876, the expanded definition of navigable

49. *Id.* at 412–13, 417–18, citing Hale, *supra* note 37, at 11.

50. *Id.* at 413 (emphasis added). State ownership of navigable waters did not prevent riparian landowners from “wharfing out,” so long that the wharf did not obstruct navigation, although wharfing out did not imply any private property rights in the submerged land, since “any encroachment upon the shore, or other part of the public domain, may at all times be restricted and controlled by legislation.” Gough v. Bell, 22 N.J.L. 441, 469 (1850).

51. Pollard v. Hagan, 44 U.S. 212, 228–29 (1845) (applying the state ownership doctrine of navigable waters recognized in *Martin v. Waddell* to the new states of the West under equal footing, reasoning that they should have the same ownership rights and public obligations as the original states). Even though the original states did not benefit from the equal footing conveyance of submerged lands and had developed their own state laws of navigability for land title purposes, the Fourth Circuit ruled that equal footing and associated federal land title rules applied to those in North Carolina v. Alcoa Power Generating, Inc., 853 F.3d 140, 149 (4th Cir. 2017) (en banc).

52. The Propeller Genesee Chief v. Fitzhugh, 53 U.S. 443, 457 (1851); see Blumm & Engle, *supra* note 35, at 12 nn.60–61 (discussing *Genesee Chief*, which overruled The Steamboat Thomas Jefferson, 23 U.S. (1825), which had limited federal admiralty jurisdiction to tidal waters).

53. Barney v. Keokuk, 94 U.S. 324, 336 (1876) (applying navigability under admiralty to proprietary ownership); see Blumm & Engle, *supra* note 34, at 12 n.62 (discussing *Barney*). Over a century later, the Court clarified that the expansion of navigable waters to include those that are navigable-in-fact did not mean that tidal

waters, coupled with the federal equal footing doctrine, led both to expanded federal regulatory jurisdiction and to increased state proprietary ownership. Public usufructuary rights increased correspondingly.

C. The Lodestar Case: Illinois Central Railroad v. Illinois

According to Professor Sax, a long-running dispute over the ownership of most of the inner harbor of Chicago was “[t]he most celebrated public trust case in American law.”⁵⁴ The dispute concerned the Illinois state legislature’s 1869 grant of the bed of Lake Michigan to a railroad company, which would in all probability use its ownership to control shipping on the lake both to and from its shoreside tracks.⁵⁵ An ensuing legislature thought better of the grant four years later and revoked it.⁵⁶ Although it took some two decades for the case to reach the Supreme Court,⁵⁷ the Court upheld the legislature’s right to revoke the grant without compensation in 1892.⁵⁸ The Court, per Justice Stephen J. Field, explained that the state’s ownership of the lakebed was “in trust for the people . . . that they may enjoy the navigation of the waters, carry on commerce over them, and have a liberty of fishing therein freed from the obstruction or interference of private parties.”⁵⁹ Submerged lands had “different in character” than public lands available for sale, since they were trust lands, requiring “management and control” by the state.⁶⁰

Consequently, according to Justice Field, the state could “no more abdicate its trust over property in which the whole people are interested, like navigable waters and the soils underneath them . . . than it can abdicate its police powers in the administration of government and the preservation of the peace.”⁶¹ Thus, the Court held that the lakebed was largely inalienable, because privatization would “place every harbor in the country at the mercy of a majority of the legislature of the state in which

waters were not always categorically included within the term. *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 475–76 (1988).

54. Sax, *supra* note 1, at 489.

55. For a detailed analysis of the case, see Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in Illinois Central*, 71 U. CHI. L. REV. 799 (2004).

56. The 1869 grant was likely influenced by corruption, *see id.* at 887–95, 927–30.

57. *See id.* at 913–19, explaining why the case took so long to reach the Court.

58. *Ill. Central R.R. Co. v. Illinois*, 146 U.S. 187 (1892).

59. *Id.* at 452.

60. *Id.* at 452–53.

61. *Id.* at 453.

the harbor is situated.”⁶² The result of such privatization of public resources “would be a grievance which never could be long borne by a free people.”⁶³ Although the Court was careful to announce two exceptions to its non-alienation rule,⁶⁴ *Illinois Central* established that resources of great public concern were held by the sovereign in trust for the people, largely inalienable, seemingly universal, and protected by searching judicial review.⁶⁵

D. Recognizing the *Jus Publicum*

Just two years after its *Illinois Central* decision, the Supreme Court returned to the PTD in a case involving Pacific Coast tidelands. A landowner with a federal Oregon Land Donation Act grant claimed ownership of tidelands; a grantee of the state also claimed ownership. In *Shively v. Bowlby*, the Supreme Court affirmed an Oregon Supreme Court decision in favor of the state grantee, narrowly construing the scope of the federal grant.⁶⁶

Retracing the origins of the PTD and citing *Hale*, the *Shively* Court distinguished private proprietary rights—the *jus privatum*—from inalienable PTD rights—the *jus publicum*.⁶⁷ The Court indicated that at the time of the pre-statehood federal grant the federal government held the tidelands in trust for the state, which would acquire them under equal footing at statehood, and that the trust was “incidental to the sovereignty

62. *Id.* at 455.

63. *Id.* at 456.

64. The two exceptions the Court recognized were (1) “for the improvement of the navigation and use of the waters” (that is, for uses serving trust purposes); or (2) “when parcels can be disposed of without impairment of the public interest in what remains” (that is, non-impairment of remaining trust resources). *Id.* at 453, 455–56.

65. Professor Sax thought that *Illinois Central* established the “central substantive thought” in PTD litigation: “When a state holds a resource which is available for the free use of the general public, a court will look with considerable skepticism upon *any* governmental conduct which is calculated *either* to relocate that resource to more restricted uses *or* to subject public uses to the self-interest of private parties.” Sax, *supra* note 1, at 490 (emphasis in original).

66. *Shively v. Bowlby*, 152 U.S. 1 (1894), *aff’g* *Bowlby v. Shively*, 30 P. 154 (Or. 1892).

67. *Id.* at 11, 48–49 (citing *Hale*). Separating the *jus privatum* and the *jus publicum* was conceptually significant because that distinction made clear private lands burdened with the *jus publicum* could be trust lands.

of the state.”⁶⁸ Consequently, such pre-statehood federal grants would be upheld only in exceptional circumstances.⁶⁹ This pre-statehood federal trust obligation indicates that the obligations imposed on the sovereign by the PTD are not limited to states.

E. Establishing the Public Trust in Wildlife

In 1896, two years after *Shively*, the Court extended the PTD to wildlife, upholding a Connecticut wildlife conservation statute that prohibited birds killed during the hunting season from being transported out of state.⁷⁰ In *Geer v. Connecticut*, the Court, per Justice Edward White, reviewed ancient and English common law principles of sovereign trust ownership of air, water, sea, shores, stating that “[t]he power . . . lodged in the State, resulting from the common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people . . .”⁷¹ The state’s sovereign trust over wildlife was “an attribute of government” to be exercised as a trust “represent[ing] its people, and the ownership is that of the people in their united sovereignty.”⁷²

This trust was sufficient to sustain the state’s conservation measure, as the Court announced that the state had “a duty . . . to enact such laws as will best preserve the subject of the trust, and secure its beneficial use in the future to the people of the state.”⁷³ *Geer*’s recognition of the state’s trust obligations concerning wildlife untethered the PTD from navigability requirements, enabling states to extend trust obligations to those resources in which “the whole people are interested,”⁷⁴ not just

68. *Id.* at 54. The Court explained that lands subject to equal footing “are held by the United States for the benefit of the whole people . . . in trust for future states.” *Id.* at 49.

69. Pre-statehood grants are upheld only in cases fulfilling an “international duty” or in the case of a “public exigency.” *Id.* at 49–50. Some have succeeded, e.g., *United States v. Alaska*, 521 U.S. 1 (1997) (ruling that a Department of Interior pre-statehood withdrawal of lands in the Arctic National Wildlife Refuge included submerged lands, defeating an ensuing equal footing grant); *Idaho v. United States*, 533 U.S. 262 (2001) (deciding that a pre-statehood grant of Lake Coeur d’Alene within an Indian reservation defeated a subsequent equal footing grant). More typically, equal footing has led the Court to conclude that pre-statehood grants did not defeat equal footing; *see, e.g.*, *Utah Div. of State Lands v. United States*, 482 U.S. 193 (1987) (concerning a pre-statehood reservation of reservoir sites).

70. *Geer v. Connecticut*, 161 U.S. 519 (1896), *aff’g* *State v. Geer*, 22 A. 1012 (Conn. 1891).

71. *Id.* at 529.

72. *Id.* at 527, 529.

73. *Id.* at 534.

74. *Ill. Central R.R. Co. v. Illinois*, 146 U.S. 387, 453, 456 (1892).

navigable waters. That untethering began almost simultaneously, in a pathbreaking 1893 decision of the Minnesota Supreme Court.

F. The PTD Beyond Title Navigability

The growth of the scope of the PTD under the expanding definition of navigability was soon accompanied by a surprising expansion from the states, which disconnected the PTD from title navigability and broadened the purposes of the doctrine. The bellwether case was *Lamprey v. Metcalf*, in which the Minnesota Supreme Court in 1893 rejected a state claim of ownership of a dry lakebed on the ground that the lake was a nonnavigable water at statehood.⁷⁵

But in dicta that would be repeated by many other courts, the court, per Justice William Mitchell,⁷⁶ declared that states could define the scope of public rights in waterways. He announced that navigable waters were all those that were subject to recreational use, like “sailing, rowing, fishing, skating, taking water for domestic, agricultural, and even city purposes, cutting ice, and other public purposes which cannot now be enumerated or even anticipated.”⁷⁷ This broad conception of public rights became foundational to the modern PTD. Justice Mitchell advised that a broad definition of navigability was appropriate because “[t]o hand over all these lakes to private ownership, under any old or narrow test, would be a great wrong upon the public for all time.”⁷⁸ This antimonopoly sentiment has been a persistent theme in public trust litigation.⁷⁹

Lamprey was widely quoted and followed by courts in other states.⁸⁰ Its recreational test for navigability is now the dominant state law

75. 53 N.W. 1139 (Minn. 1893). An earlier case recognizing public rights in waterbodies whose beds were not state-owned was *Inhabitants of West Roxbury v. Stoddard*, 89 Mass. (7 Allen) 158, 171–72 (1863), where the Supreme Judicial Court ruled that the town of West Roxbury could not exclude the public from removing ice blocks from a Great Pond because “[f]ishing, fowling, boating, bathing, skating, or riding upon the ice, taking water for domestic or agricultural purposes, or for use in the arts, and the cutting and taking of ice, are lawful and free upon these ponds . . .” *Lamprey* cited *West Roxbury*, but since the latter involved an interpretation of colonial ordinances, it had less influence on subsequent cases than *Lamprey*’s common law interpretation.

76. The namesake of what is now Mitchell-Hamline Law School.

77. *Lamprey*, 53 N.W. at 1143.

78. *Id.* Although the quotes above were technically dicta, the court applied them in *State v. Korrer*, 148 N.W. 617, 622 (Minn. 1914) (“Under the law of this state the state owns the soil under public waters.”).

79. See Blumm & Moses, *supra* note 39.

80. See *Guilliams v. Beaver Lake Club*, 175 P. 437, 442 (Or. 1918) (concluding a small lagoon, capable of floating only small crafts, was navigable-in-fact); *People ex rel. Baker v. Mack*, 97 Cal. Rptr. 448, 451 (Cal. Ct. App. 1971)

interpretation, according to the leading water law treatise.⁸¹ Today, its recognition that public rights exist on all waterways capable of supporting recreational watercraft, regardless of bedland ownership⁸² has enlarged the scope of the PTD considerably beyond the navigable waterways subject to equal footing. In fact, the dichotomy between the scope of the PTD and federal equal footing doctrine may have been what Justice Kennedy was referring to in his *PPL Montana v. Montana* opinion when he suggested that while title navigability under the equal footing doctrine was a federal test, the PTD was a state-law doctrine.⁸³ That observation has been misconstrued by one court as meaning that the PTD does not apply to the federal government.⁸⁴ But the fact that the PTD has been considerably enlarged by state law beyond waterbodies whose beds are title-navigable

(holding that waterways used for recreational purposes are navigable, citing *Lamprey*); *Hillebrand v. Knapp*, 274 N.W. 821, 822 (S.D. 1937) (“[W]hether or not waters are navigable depends upon the natural availability of waters for public purposes . . .” (citing *Lamprey*, 53 N.W. at 1143)); *Roberts v. Taylor*, 181 N.W. 622, 626 (N.D. 1921) (“A public use may not be confined entirely within a use for trade purposes alone.” (emphasis omitted)); *State v. McIlroy*, 595 S.W.2d 659, 664–65 (Ark. 1980) (holding that a river was navigable because it could “be used for a substantial portion of the year for recreational purposes”), *cert. denied*, 449 U.S. 843 (1980); *Elder v. Delcour*, 269 S.W.2d 17, 26 (Mo. 1954); *Smart v. Aroostook Lumber Co.*, 68 A. 527, 532 (Me. 1907); *Muench v. Pub. Serv. Comm’n*, 53 N.W.2d 514, 519–20 (Wis. 1952).

81. 2 WATERS AND WATER RIGHTS, § 32.03(a)(1) (Amy K. Kelly ed. 3rd ed. 2018) (discussing the so-called “pleasure boat” test).

82. In some states, like Minnesota, the beds of waterways that are recreationally navigable are jointly owned. *State v. Korror*, 148 N.W. 617, 622 (Minn. 1914) (In a clear recognition of the distinction of the distinction between the *jus publicum* and the *jus privatum*, the court stated “[u]nder the law of this state, the state owns the soil under public waters in a sovereign, not a proprietary capacity, but the state still owns it, and the shore owner does not.”).

83. 565 U.S. 576, 593 (2012) (deciding that Montana Supreme Court misinterpreted the federal equal footing test for riverbed ownership by failing to apply the “segment” rule to determine title-navigable waters).

84. The D.C. district court in *Alec L. v. Jackson*, 863 F. Supp. 2d 11, 15 (D. D.C. 2012), misinterpreted Justice Kennedy’s dicta, 565 U.S. at 603, to mean that the PTD was inapplicable to the federal government. The district court in *Juliana v. United States*, 217 F. Supp. 3d 1224, 1259 (D. Or. 2016) disagreed (“I can think of no reason why the public trust doctrine, which came to this country through the Roman and English roots of our civil system, would apply to the states but not to the federal government.”), *overruled on other grounds*, 947 F.3d 1159 (9th Cir. 2020). For a detailed evaluation of the district court’s decision in *Juliana*, see Michael C. Blumm & Mary Christiana Wood, “No Ordinary Lawsuit:” *Climate Change, Due Process, and the Public Trust Doctrine*, 67 AM. U. L. REV. 1 (2017).

should have no effect on the applicability of the PTD to the federal sovereign.⁸⁵

By 1970, when Sax wrote his article, some elements of the PTD—including sovereigns’ obligation to hold certain natural resources (those in which the “whole people” were interested⁸⁶) in trust for the people, including future generations—were well established, if unnamed. Others, like the PTD’s application to wildlife and the role of states in expanding the scope of the doctrine, were less well recognized⁸⁷ but equally well established.

IV. THE SAXION PUBLIC TRUST DOCTRINE

At the dawn of what has been called “the heyday of the modern environmental era,”⁸⁸ Joe Sax’s *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention* revived an ancient doctrine providing citizens with a means to challenge government action or inaction threatening so-called “trust resources,” traditionally navigable waters and their bedlands.⁸⁹ Sax’s resurrection of the public trust offered a legal doctrine with what he believed had the “breadth and substantive content” necessary to address modern natural resource management problems.⁹⁰ The article was groundbreaking, not only for its revival of an historic, largely forgotten doctrine, but also, according to Professor Carol Rose, for “unhook[ing] it from its traditional moorings on and around water bodies.”⁹¹

Sax believed the public trust doctrine to be an “instrument for democratization” that could inject a needed level of judicial skepticism towards “dubious governmental conduct.”⁹² Professor Holly Doremus

85. The argument for the application of the PTD to the federal government is made in Michael C. Blumm & Lynn S. Shaffer, *The Federal Public Trust Doctrine: Misinterpreting Justice Kennedy and Illinois Central Railroad*, 45 ENVTL. L. 399 (2015).

86. Ill. Central R.R. Co. v. Illinois, 146 U.S. 387, 453 (1892).

87. Indeed, Professor Sax’s article did not mention *Geer v. Connecticut* or focus on *Lamprey* or its progeny.

88. Richard J. Lazarus, *Pursuing “Environmental Justice”: The Distributional Effects of Environmental Protection*, 87 NW U. L. REV. 787, 788 (1993).

89. Sax, *supra* note 1.

90. *Id.* at 474.

91. Carol M. Rose, *Joseph Sax and the Idea of the Public Trust*, 25 ECOLOGY L.Q. 351, 352 (1998).

92. Sax, *supra* note 1, at 491.

described Sax as the “architect of the modern public trust doctrine,”⁹³ and by 2020 Sax’s article had been cited by 47 cases and 1184 articles.⁹⁴ Even the doctrine’s critics have acknowledged Sax’s article as the “truly seminal” one.⁹⁵

Sax gave only a brief history of the public trust doctrine’s journey from Roman to English to American law, explaining the general rule that states take the title to waterbeds up to the high water mark in “trusteeship” for the public.⁹⁶ He described the public trust as an inherent limit on government authority tied to intrinsically important public interests, not a property right granted to the public by the government.⁹⁷ According to Sax, trust assets like historic fishing and navigation were “so intrinsically important to every citizen” that they warranted government protection from private monopolization. Further, other assets “are so particularly gifts of nature’s bounty” that they must remain accessible to all. Finally, “certain uses have a peculiarly public nature that makes their adaptation to private use inappropriate.”⁹⁸ Sax construed several traditional public trust cases⁹⁹ to mean that the government cannot make a grant to a private party

93. Holly Doremus, *In Memoriam: In Honor of Joe Sax: A Grateful Appreciation*, 39 VT. L. REV. 799, 801 (2015).

94. Figures based on data from HeinOnline database, as of December 7, 2020.

95. See, e.g., Huffman, *supra* note 23, at 339.

96. Sax, *supra* note 1, at 475–76. Sax thought that how this trusteeship restrained government dealings with the land was subject to some confusion. On the one hand, the trusteeship may “put such lands wholly beyond the police power of the state, making them inalienable and unchangeable in use.” *Id.* at 476–77. On the other hand, the trusteeship may imply “nothing more than that state authority must be exercised consistent with the general police power.” *Id.* The former describes a public right that imposes a restraint on the government, while the latter implies no restraint at all beyond the implicit restraint that police power be used for a public purpose. *Id.*

97. *Id.* at 478–84.

98. *Id.* at 485.

99. *State v. Cleveland & Pittsburgh R.R.*, N.E. 677, 682 (Ohio 1916) (“An individual may abandon his private property, but a public trustee cannot.”); *Brickell v. Trammel*, 559, 82 S. 221, 226 (Fla. 1919) (“States may . . . grant to individuals limited privileges in the lands under navigable waters, but not so as to divert them or the waters thereon from their proper uses for the public welfare.”); *People v. California Fish Co.*, 138 P. 79 (Cal. 1913) (applying a more rigorous standard of review than used to analyze conveyances by private parties); *Commonwealth v. Alger*, 61 Mass. 53, 74–75 (Mass. 1851) (state grants of riparian land do not include the right to obstruct navigation); *City of Milwaukee v. State*, 193 Wis, 423, 451–52 (Wis. 1927) (upholding the state’s grant of a segment of Milwaukee harbor land to a private steel company).

if the effect of the grant meant that the government abdicated its authority to govern.¹⁰⁰

Sax famously anointed the Supreme Court's decision in *Illinois Central*,¹⁰¹ as the "lodestar in American public trust law."¹⁰² The *Illinois Central* Court held the state legislature's extensive grant of submerged lands along the Chicago waterfront to a railroad was beyond the state's legislative power.¹⁰³ The Court, per Justice Field, distinguished government lands intended for sale to the public from those held in trust and, according to Sax, established a principle of judicial skepticism at the center of public trust doctrine litigation; according to Sax:

When a state holds a resource, which is available for the free use of the general public, a court will look with considerable skepticism upon *any* governmental conduct which is calculated *either* to reallocate that resource to more restricted uses *or* to subject public uses to the self-interest of private parties.¹⁰⁴

The *Illinois Central* Court viewed the legislature's grant to be at odds with the government's duty to provide public services and benefits.¹⁰⁵ For Sax,

100. Sax, *supra* note 1, at 488–89; *Ill. Central R.R. Co. v. Illinois*, 146 U.S. 387, 453 (1892) ("The state can no more abdicate its trust over property in which the whole people are interested . . . so as to leave them entirely under the use and control of private parties, . . . than it can abdicate its police powers in the administration of government and the preservation of the peace.").

101. 146 U.S. 387 (1892); *see supra* notes 54–65 and accompanying text.

102. Sax, *supra* note 1, at 489.

103. *Illinois Central*, 146 U.S. at 453. There has always been some question as to the effect of the Court's decision on the conveyance at issue: *Illinois Central* might be interpreted to make such grants voidable at the discretion of the state ("Any grant of the kind is necessarily revocable, and the exercise of the trust by which the property was held by the state can be resumed at any time."), *id.* at 455, or void, wholly ineffective ("We hold, therefore, that any attempted cession of the ownership and control of the State . . . was inoperative . . ."). *Id.* at 460. The Court waffled on the issue: "A grant of all lands under the navigable waters of a state has never been adjudged to be within the legislative power; and any attempted grant of the kind would be held, if not absolutely void on its face as subject to revocation." *Id.* at 453. The issue did not affect the result in the case because the state sued to void the 1869 grant.

104. Sax, *supra* note 1, at 490 (emphasis in original).

105. *Illinois Central*, 146 U.S. at 453 ("The state can no more abdicate its trust over property in which the whole people are interested, . . . than it can abdicate its police powers in the administration of government and the preservation of the peace.").

the case provided a foundation for courts to infuse some democratization into public trust management decisions.¹⁰⁶

Sax explored a series of contemporary cases that he maintained adopted the skepticism that *Illinois Central* called for in reviewing suspect public trust management decisions.¹⁰⁷ He devoted close attention to the Supreme Judicial Court of Massachusetts' decision *Gould v. Greylock Reservation Commission*.¹⁰⁸ The *Greylock* court resolved a controversy over 9,000 acres of land purchased by the state for a public park on which a legislatively-created agency wanted to lease to a resort developer to build a ski development on 4,400 acres; about half of the park.¹⁰⁹ Five citizens challenged the decision, charging that the legislation authorizing the park development was invalid. Although the court avoided invalidating the statute, it reversed the lower court's dismissal of the case and struck down the lease and management agreement after a close examination of each.¹¹⁰ According to the court, the Greylock Reservation, as a state park, could not be "diverted to another inconsistent public use without plain and explicit legislation to that end."¹¹¹ The court consequently held that the management agreement impermissibly delegated the agency's responsibility to manage the park and also found "no express grant to the [agency] of power to permit use of public lands . . . for what seems, in part at least, a commercial venture for private profit."¹¹²

The *Gould* court never used explicit public trust language, but Sax maintained that the court imposed a "presumption that the state does not ordinarily intend to divert trust properties in such a manner as to lessen public uses."¹¹³ By requiring "express legislative authority," the Massachusetts court increased the transparency of public trust resource management in effect democratizing the policymaking process by insisting on express legislative approvals of conveyances of trust assets, even leases.¹¹⁴

Although in 1970 the scope of the public trust seemed narrowly confined to navigable waters, Sax contended that the limitations imposed

106. Sax, *supra* note 1, at 491 ("The model for judicial skepticism that [*Illinois Central*] built poses a set of relevant standards for current, less dramatic instances of dubious governmental conduct.").

107. *Id.* at 491–556.

108. 350 Mass. 410 (1966).

109. *Id.* at 411–12; *see* Sax, *supra* note 1, at 492–93.

110. 350 Mass. at 427.

111. *Id.* at 419.

112. *Id.* at 426 (This anti-commercial sentiment is also found in the Hawaii Supreme Court's decision in *Waiahole Ditch*, *infra* note 201 and accompanying text.).

113. Sax, *supra* note 1, at 494.

114. *Id.* at 496.

by the PTD could be applied “in a wide range of situations in which diffuse public interests need protection against tightly organized groups with clear and immediate goals,”¹¹⁵ in effect providing an antidote to agency capture by special interests.¹¹⁶ *Gould* was just one of many cases examined by Sax¹¹⁷ in which courts closely scrutinized agency decisions in order to protect trust resources.¹¹⁸ Courts had crafted what Sax called “the phenomenon of indirect intervention;”¹¹⁹ that is, imposing procedural requirements rather than inserting themselves in the decision-making process by addressing the merits of a public trust claim, which could create separation-of-powers issues.¹²⁰ In other words, courts resorted to a

115. *Id.* at 556.

116. *See generally* George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3 (1971).

117. *See* *Priewe v. Wis. State Land and Improvement Co.*, 67 N.W. 918 (Wis. 1896); *In re Trempealeau Drainage Dist.: Merwin v. Houghton*, 131 N.W. 838 (Wis. 1911); *In re Crawford Cty. Levee & Drainage Dist. No. 1*, 196 N.W. 874 (Wis. 1924), *cert. denied*, 264 U.S. 598 (1924); *City of Milwaukee v. State*, 214 N.W. 820 (Wis. 1927); *State v. Pub. Serv. Comm’n*, 81 N.W.2d 71 (Wis. 1957); *City of Madison v. State*, 83 N.W.2d 674 (Wis. 1957); *City of Madison v. Tolzmann*, 97 N.W.2d 513, (Wis. 1959); *Muench v. Pub. Serv. Comm’n*, 53 N.W.2d 514, *reh’g*, 261 Wis. 515c (Wis. 1952); *People v. Cal. Fish Co.*, 166 Cal. 576 (Cal. 1913); *Marks v. Whitney*, 276 Cal. App. 2d 72, 80 Cal. Rptr. 606 (Cal. 1969), *petition for reh’g granted*, Civil No. 24,883 (Ct. App. Oct. 7, 1969); *People ex rel. San Francisco Bay Conservation and Dev. Comm’n v. Town of Emeryville*, 69 Cal. 2d 533 (Cal. 1968); *Miramar Co. v. City of Santa Barbara*, 23 Cal. 2d 170 (Cal. 1943); *Ventura Port Dist. v. Taxpayers, Prop. Owners, Citizens & Electors*, 53 Cal. 2d 227 (Cal. 1959); *Martin v. Smith*, 184 Cal. App. 2d 571 (Cal. 1960); *Haggerty v. City of Oakland*, 161 Cal. App. 2d 407 (1958); *People v. City of Long Beach*, 51 Cal. 2d 875 (Cal. App. 1959); *City of Long Beach v. Marshall*, 11 Cal. 2d 609 (1938); *Rogers v. City of Mobile*, 169 So. 2d 282 (Ala. 1964); *Texas Oyster Growers Ass’n v. Odom*, 385 S.W.2d 899 (Tex. Ct. Civ. App. 1965); *Parks v. Simpson*, 137 So. 2d 136 (Miss. 1962).

118. Looking at Wisconsin, Sax claimed its courts “developed two useful approaches . . . First, . . . specif[ying] criteria by which state dealings with such lands may be judged . . . Second, . . . recogniz[ing] that trust lands are of statewide concern and that authority to deal with them cannot be delegated by the state legislature to any group which is less broadly based. In this manner, [the judiciary] has fulfilled its function as an ensurer of the efficacy of the democratic process.” Sax, *supra* note 1, at 523. Turning to California, he found its courts to be “in accord with historic patterns elsewhere, utilizing the public trust concept to constrain activities which significantly shift public values into private uses or uses which benefit some limited group.” *Id.* at 538. He contended that “[i]ndeed, it seems fair to describe the evolution of much public trust law in the United States as an effort to retreat from the excessive generosity of early legislatures and public land management agencies.” *Id.* at 547.

119. *Id.* at 558–559.

120. *Id.* at 558. Procedural requirements, of course, would soon be imposed on federal agencies by the National Environmental Policy Act of 1969, 42

legislative remand, requiring “a truly representative body” to “openly and explicitly” justify a public trust management decision.¹²¹ In public trust cases, the legislative remand served to democratize the process by, according to Sax, “remanding . . . after public opinion has been aroused.”¹²² This principle of public accountability fulfilled what Sax thought was the court’s fundamental function in disputes involving public trust resources.¹²³

Sax observed that a public trust principle of judicial skepticism is “properly invoked principally to deal with issues which . . . tend to be made at low-visibility levels.”¹²⁴ He gave an example of a highway agency holding poorly attended public hearings due to poorly publicized public notice of its development plans affecting in a large geographic area.¹²⁵ In such a case, “a diffuse majority is made subject to the will of a concerted minority.”¹²⁶ Often, this sort of imbalance occurs when the government: (1) conveys public trust resources at less than market value for no obvious reason;¹²⁷ (2) grants an exclusive usufruct in public trust resources to a private entity, undermining broad public use;¹²⁸ or (3) reallocates diffuse public uses to private or narrower public uses.¹²⁹ A variation on the third example was whether the resource in question is being used for its natural purpose, such as, in Sax’s words, “a lake being used ‘as a lake.’”¹³⁰ In all of these situations, a legislative remand “serves to call attention to the inadequacies in conventional public techniques for evaluating resource decisions involving diffuse public uses.”¹³¹ In an effort to elucidate the judiciary’s role in promoting rational natural resource management, Sax’s article “added a powerful, if controversial, rhetorical element”¹³² to natural resources law.

Ten years after his 1970 article Sax, dissatisfied with the PTD’s confinement to a limitation on alienation of narrowly-defined trust property, authored a follow-up article: *Liberating the Public Trust from its*

U.S.C. §§ 4321–4370h (2012). *See generally* DANIEL R. MANDELKER, NEPA LAW & LITIGATION (Environmental Law Series 2d, 2019 ed.).

121. Sax, *supra* note 1, at 559.

122. *Id.* at 560.

123. *Id.* at 561.

124. *Id.* at 559 n.268.

125. *Id.* at 558.

126. *Id.* at 560.

127. *Id.* at 562.

128. *Id.*

129. *Id.* at 563.

130. *Id.* at 565.

131. *Id.* at 564.

132. *See* Rose, *supra* note 91, at 352.

Historical Shackles.¹³³ He described the essence of property law as “a respect for reasonable expectations.”¹³⁴ In other words, “stability in ownership is what we protect with property rights.”¹³⁵ Importantly, this stability was not meant to foreclose change, but instead provided for a transition rather than a collapse.¹³⁶ As applied to environmental problems, change in use itself is not the problem, but rather a destabilizing rate of change.¹³⁷ In Sax’s view, the public trust doctrine functions to “protect such public expectations against destabilizing changes.”¹³⁸ With this perspective, the public trust doctrine can “embrace a much wider range of things than private ownership,”¹³⁹ expanding the concepts of *jus publicum* and *jus privitum* to a variety of natural resources management issues.

To liberate the public trust doctrine from its historical navigation shackles, Sax explored the “tradition of the commons in medieval Europe.”¹⁴⁰ In feudal times, “as the common use of uncultivated areas became customary, it was natural for these customary uses to be described as legally compelled and required by justice.”¹⁴¹ Sax described the commons as an “agrarian economy of the forest”¹⁴² that was capable of thwarting a nascent capitalist ethos by allowing access for peasants to subsist on the unenclosed lands.¹⁴³ He also noted that the commons arose from customary law, which is not unchanging.¹⁴⁴ The commons was often conveyed to private use, but private title did not always exclude the public’s common use.¹⁴⁵ Disputes over the use of the commons were not

133. Joseph L. Sax, *Liberating the Public Trust Doctrine from its Historical Shackles*, 14 U.C. DAVIS L. REV. 185 (1980).

134. *Id.* at 186–87.

135. *Id.* at 188.

136. *Id.*

137. *Id.*

138. *Id.*; see Michael C. Blumm, *The Public Trust Doctrine and Private Property: The Accommodation Principle*, 27 PACE ENVTL. L. REV. 649 (2010) (explaining that the PTD did not aim to obliterate private property but coexist with it through what the article labeled the accommodation principle).

139. Sax, *Liberating*, *supra* note 133, at 189.

140. *Id.*

141. *Id.*

142. *Id.* at 190. See McGraw, *supra* note 35.

143. *Id.*

144. *Id.* at 189.

145. *Id.* at 191.

usually over title or custom, but instead “the sharp disappointment of expectations,”¹⁴⁶ such as a peasant’s loss of subsistence.¹⁴⁷

In the modern era, Sax analogized this antipathy to destabilizing change by pointing to *City of Berkeley v. Superior Court of Alameda County*,¹⁴⁸ a decision of the California Supreme Court that resolved a longstanding dispute over San Francisco Bay tidelands, much of which the legislature had conveyed to private parties in the late 19th century.¹⁴⁹ Overruling previous decisions which declared the conveyances to be free of the public trust, the court held that the PTD burdened private tidelands that remained unfilled and unimproved tidelands.¹⁵⁰ However, tracts already filled and improved and no longer adaptable for trust uses were free of the trust,¹⁵¹ a signature example of the PTD’s accommodation principle.¹⁵²

Although the *Mono Lake*¹⁵³ controversy was still in the lower courts when he wrote, Sax anticipated that the notion of destabilizing change could prove influential in that decision, citing the impending ecological disaster from Los Angeles DWP’s export of the lake’s water.¹⁵⁴ His call for a judicial remand to the more representative branches of government was effectively answered by the California Supreme Court’s decision requiring longstanding private uses of water to be balanced against equally longstanding public uses (though unrecognized by legal protection) in a PTD analysis protecting the reasonable expectations of diffuse interests.¹⁵⁵

146. *Id.* at 191–92.

147. See Connor McDermott, *Monopolizers of the Soil: The Commons as a Source of Public Trust Responsibilities*, 61 NAT. RES. J. ____ (forthcoming 2020), SSRN, Feb. 19, 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3540669.

148. 606 P.2d 362 (Cal. 1980), *cert denied*, 101 S. Ct. 119 (1980).

149. *Id.* at 363.

150. *Id.*

151. The court accounted for both actual public use of tidal lands and a grantee’s 100-year chain of title to create a remedy accommodating both, despite there being “no doctrinal basis for recognizing these values.” *Id.*

152. See Blumm, *supra* note 138, at 665–66 (“The accommodation principle . . . has become the chief characteristic of the public trust doctrine’s effect on private property.”).

153. *Nat’l Audubon Soc. v. Sup. Ct. of Alpine Cnty.*, 33 Cal.3d 419 (Cal. 1983).

154. Sax, *supra* note 133, at 192.

155. Sax’s observations from the feudal era were not an effort to apply the doctrine of custom to American law, but instead to shine light on the power that expectations and destabilization can have on property law. *Id.* at 192–93. He hoped to imbue the public trust doctrine with the lesson of customary law. “[T]he fact of expectations rather than some formality is central.” *Id.* at 193. Title is not irrelevant,

V. THE PUBLIC TRUST DOCTRINE IN THE HALF-CENTURY AFTER SAX

In the years since Sax wrote, the PTD has expanded considerably both in terms of the definition protected trust purposes and trust properties (the trust *res*). Some illustrative examples of this expansion are discussed below, including case law and statutes involving upland resources like beaches, Western water rights, groundwater, oil and gas revenues, and the atmosphere.

A. New Jersey Beaches: The Public Trust Upland

One of the first jurisdictions to expand the scope of the PTD in the wake of Sax's article was New Jersey, the American homeland of the doctrine.¹⁵⁶ The state's beaches have long been in high public demand for recreation.¹⁵⁷ Overcrowded beaches led some New Jersey municipalities to charge access fees, which the state legislature authorized.¹⁵⁸

In 1970, the year of Sax's article, the Borough of Avon-By-the-Sea began charging non-residents considerably higher fees to access its publicly owned beach than residents.¹⁵⁹ A neighboring municipality, the Borough of Neptune, objected and filed suit, claiming that that all residents of the state had a right to use public beaches to reach the ocean.¹⁶⁰ After the lower courts upheld the higher non-resident fees, the New Jersey Supreme Court reversed, recognizing that the claim was "in essence . . . a reliance on the public trust doctrine."¹⁶¹ Citing to Sax's article for the proposition that the doctrine applied to recreational use of beaches necessary to reach publicly-owned tidelands and the ocean, the court ruled that the PTD prevented the charging of discriminatory fees to non-

but "where title and expectations are not congruent, title should carry less weight." *Id.* Sax mentioned that courts may protect "rights of private property owners and their rightful expectations;" however, with public trust claims, when the expectations are so diffusely held, courts have been less willing to directly interfere. *Id.*

156. See *Arnold v. Mundy*, 6 N.J.L. 1, 42 (1821); see generally *supra* notes 46–50 and accompanying text (discussing *Arnold v. Mundy*).

157. See, e.g., *Borough of Neptune v. Borough of Avon-by-the-Sea*, 294 A.2d 47, 49 (N.J. 1972) ("Avon's year-round population of 1850, resident within its approximately seven square block area, is increased in the summertime to about 5500 people (not counting day visitors).").

158. N.J. Stat. Ann. § 40:61-22-20 (West).

159. See *Neptune*, 294 A.2d at 51.

160. *Id.*

161. *Id.*

residents.¹⁶² Although the case involved a public beach, the court signaled it might be open to extending public rights to privately owned beaches, suggesting that privatization of beaches might not relieve their owners of public trust obligations.¹⁶³

Over a decade later, the New Jersey Supreme Court revisited the beach access issue and extended the PTD to a beach owned by a “quasi-public” nonprofit corporation.¹⁶⁴ In *Mathews v. Bay Head Improvement Association*, the court recognized two distinct public rights as ancillary to the public’s ownership of tidelands and the ocean: (1) reasonable access through the beaches to reach the tidelands and ocean, and (2) reasonable enjoyment of the dry sand area.¹⁶⁵ But not all beaches had public rights, according to the court’s decision, because the PTD warranted an accommodation between public access and private beach ownership.¹⁶⁶ The court consequently established a formula for determining which New Jersey beaches had public access rights. The court introduced a four-part balancing test to ascertain whether public rights burdened the state’s beaches, depending on (1) the location of the dry sand area in relation to the tidelands, (2) the extent and availability of nearby public beaches, (3) the nature and extent of public demand, and (4) the past usage of the area by the owner.¹⁶⁷ Using these so-called *Mathews* factors, courts could recognize public trust rights in New Jersey’s uplands.

162. *Id.* at 54–55 (citing Sax, *supra* note 1, at 556, 565). The court ruled that although municipalities can charge access fees, they may not discriminate against non-residents. *Id.* at 55. In an ensuing decision, holding that a municipally-owned beach resort controlling beach access could not limit its membership to local residents, the New Jersey Supreme Court expressly rejected the argument that the PTD did not extend beyond the high-water mark of ocean tidelands. *Van Ness v. Borough of Deal*, 393 A.2d 571 (N.J. 1978).

163. *Neptune*, 294 A.2d at 54 (citing *Shively v. Bowlby*, 152 U.S. 1, 11 (1894)), on the distinction between the *jus privatum* and the *jus publicum* and stating that “[i]t may be that some such prior conveyances [of beaches] constituted an improper alienation of trust property or at least they are impliedly impressed with certain obligations on the grantee to the use of the conveyed land consistently with the public rights therein.”

164. *Mathews v. Bay Head*, 471 A.2d 355 (N.J. 1984). The Bay Head Improvement Association, a non-profit corporation, owned six of the 76 beach lots involved in the case and managed beach access to all. Membership in Bay Head was limited to residents of the borough, including non-beach owners. *Id.* at 369.

165. *Id.* at 364–65.

166. *Id.* at 365. On the trust doctrine’s “accommodation principle,” see Blumm, *supra* note 138 (supplying numerous examples of accommodation between public trust and private property rights).

167. *Mathews*, 471 A.2d at 365.

In 2005, the New Jersey Supreme Court applied the *Mathews* factors in *Raleigh Avenue Beach Association v. Atlantis Beach Club*, in which a member of the beach association defended a charge of trespass for using Atlantis' private beach.¹⁶⁸ After a trial court granted the association a three-foot wide easement on the beach to reach the high-water mark, an appeals court extended the public rights to use the entire dry sand area and upheld the charging of reasonable fees, and the supreme court affirmed.¹⁶⁹ Applying the *Mathews* factors, the court (1) observed that the location of the beach provided easy access for pedestrians, (2) pointed to the limited availability of other public beaches, (3) noted the widespread public interest in New Jersey beaches, and (4) considered the fact that the beach had free access to Raleigh Beach prior to 1996.¹⁷⁰ All four factors weighed in favor of public access.

Subsequent cases included the New Jersey Supreme Court's 2010 affirmation that no constitutional taking occurred in a state beach nourishment case.¹⁷¹ And in 2012, an appeals court upheld a lower court decision that voided an agreement between the state and private beach clubs restricting public access on the restored beach as inconsistent with the public trust doctrine.¹⁷²

B. Mono Lake: Water Rights and the Public Trust

Implementation of the Los Angeles Department of Water and Power's (DWP) second aqueduct transporting water from the Mono Basin to Los Angeles under water rights granted by the state in 1940 led to a decision that Sax anticipated.¹⁷³ The increased diversions consumed nearly

168. 879 A.2d 112 (N.J. 2005).

169. *See id.* at 118.

170. *Id.* at 121–22.

171. *City of Long Branch v. Jui Yung Liu*, 4 A.3d 532 (N.J. 2010). The court affirmed lower court decisions that the Long Branch nourishment was an avulsion, meaning that land ownership boundaries did not change, and that the Liu's claimed taking was actually PTD land, so there was no government taking. *Id.* at 551, 553, 555.

172. *Chisea v. D. Lobi Enterprises*, No. C-296-06, 2012 WL 4464382 (N.J. Super. Ct. App. Div., Sept. 28, 2012).

173. *See Sax, supra* note 133, at 192; DWP completed a second aqueduct in 1970 which would allow the full flow of four of the five feeder streams to Mono Lake. The state granted the original permit in 1940, despite acknowledging anticipated adverse effects to Mono Lake, based on the understanding that the decision was required by the water code, which puts domestic use as the highest use of water. State of California, State Water Resources Control Board, Decision 1631, Decision and Order Amending Water Right Licenses to Establish Fishery Protection Flows in Streams Tributary to Mono Lake and to Protect Public Trust Resources at Mono Lake

all of the flow of four of the five feeder streams that provided inflow to Mono Lake, causing the lake's surface area to decrease by one-third and imperiling the ecology and scenic beauty of the lake.¹⁷⁴

After failing in the lower courts, the National Audubon Society won a landmark decision in 1983 when a unanimous California Supreme Court decided that the PTD applied to common law water rights,¹⁷⁵ and therefore the DWP diversions had to be evaluated by the state under trust principles.¹⁷⁶ Although the PTD did not require a cessation of all the Mono Basin diversions, the diversions were cut back significantly until the state could produce a PTD-compliant decision on the ecological effects of the second-aqueduct diversions.¹⁷⁷ The state took eleven years to do so; its 1994 plan envisioned restoration of about half of the elevation decline the lake suffered since the state granted DWP's water rights in 1940, only a quarter of which had been restored by 2020.¹⁷⁸

The Mono Lake decision was significant for several reasons beyond averting an ecological calamity at the lake. The court applied the PTD to existing water rights for the first time, recognizing that the public trust antedated any state water right. This recognition, however, did not result in the court applying the prior appropriation law principle of first-

and in the Mono Lake Basin (1994), <https://www.monobasinresearch.org/images/legal/d1631text.php>; see also Joseph L. Sax, *The Limits of Private Rights in Public Waters*, 19 ENVTL. L. 473 (1989); Joseph L. Sax, *The Constitution, Property Rights, and the Future of Water Law*, 61 U. COLO. L. REV. 257, 269 (1990).

174. Nat'l Audubon Soc. v. Sup. Ct. of Alpine Cty. (*Mono Lake*), 658 P.2d 709, 711 (Cal. 1983) ("The ultimate effect of continued diversions is a matter of intense dispute, but there seems little doubt that both the scenic beauty and the ecological values of Mono Lake are imperiled.").

175. The court stated that the PTD and state water rights were "parts of an integrated system of water law." *Id.* at 732 (proceeding to provide the California Water Resources Control Board with a framework to incorporate the PTD into water allocation decision making).

176. *Id.* at 727.

177. Not until 1989 were diversions from Mono Lake reduced, due to a preliminary injunction ordered by the Superior Court of El Dorado County. DWP did not export any water from Mono Lake following the injunction until the 1994 state water board's decision allocating instream flows. Decision 1631, *supra* note 179.

178. The Water Resources Control Board's 1994 decision amended DWP's water rights in order to allow Mono Lake to return to an elevation level of 6,392 above sea-level, about 25 feet below pre-diversion levels plan, but significantly higher than they were in 1983, when the state supreme court decided the case. As of January 1, 2020, the level of the lake was recorded at 6,382.5 feet above sea level, still 9.5 feet below the state's goal but over 15 feet higher than they were at the time of the court's decision. The Mono Lake Committee, *Mono Lake Level*, <https://www.monolake.org/today/water> (last visited Jan. 29, 2020).

in-time,¹⁷⁹ which would have allocated all the water to trust uses. Instead, the court adopted a kind of equitable apportionment under which the state would exercise “continuous supervisory control” to ensure consideration of both the economic and ecological effects of actions on trust resources.¹⁸⁰ The court emphasized that the state legislature had “the power to grant usufructuary licenses . . . even though this taking does not promote, and may unavoidably harm trust uses” to maintain diversions central to the economy of the state, such as continued transboundary transfers from northern California streams south.¹⁸¹ On the other hand, the decision made clear that there are no vested water rights in the state; all water rights are subject to the PTD.¹⁸² The result is that water rights in California are subject to administrative reconsideration using trust principles.

The California Supreme Court also affirmed the principle that the public trust included recreational and ecological purposes and must be “sufficiently flexible to encompass changing public needs.”¹⁸³ These needs included “the scenic views of the lake and its shore, the purity of the air, and the use of the lake for nesting and feeding by birds.”¹⁸⁴ Moreover, the court upheld broad citizen standing, proclaiming that “any member of the general public has standing to raise a claim of public harm to the public trust.”¹⁸⁵

The *Mono Lake* decision significantly expanded the scope of the PTD by including non-navigable tributaries that affect navigable waters, as defined by state law.¹⁸⁶ A recent application of that “affectation

179. *Mono Lake*, 658 P.2d at 727. See Dave Owen, *The Mono Lake Case, the Public Trust Doctrine, and the Administrative State*, 45 U.C. DAVIS L. REV. 1099, 1101 (2012) (finding no widespread ensuing case law on the PTD).

180. *Mono Lake*, 658 P.2d at 727. The state has “an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses wherever feasible.” *Id.*

181. *Id.*

182. The court stated that the state may reconsider and reallocate water rights when taking into account diversions affecting the Mono Lake environment. *Id.* at 727; see Owen, *supra* note 179, at 1105 (discussing that the effect of the *Mono Lake* decision on the state water agency, despite a lack of ensuing case law).

183. 658 P.2d at 719, relying on *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971).

184. *Id.*

185. *Id.* at 716 n.11, citing *Marks*, 491 P.2d at 797.

186. 658 P.2d at 720. In 1989, the California Court of Appeal interpreted the state’s Fish and Game Code to require protection of the fish in the Mono Lake feeder streams, effectively establishing minimum flow requirements. *Cal. Trout v. Superior Court*, 266 Cal. Rptr. 788, 791 (Cal. Ct. App. 1989). The California Supreme Court subsequently interpreted this decision, in conjunction with its earlier *Mono Lake* decision on water rights, to establish two PTDs in the state: a statutory one for fish

principle” extended PTD protection to California groundwater where its pumping affected a navigable surface water.¹⁸⁷ Groundwater is subject to the PTD in Hawaii without the condition of showing an effect on navigable waters, as illustrated by the next case.

C. Waiahole Ditch: Groundwater in Trust

The PTD in Hawaii, first judicially recognized in 1899,¹⁸⁸ was incorporated into the Hawaiian Constitution in 1978.¹⁸⁹ The Hawai’i Supreme Court interpreted the constitutional language to include groundwater exports from windward to leeward Oahu in the so-called *Waiahole Ditch* case in 2000.¹⁹⁰ The exports began in 1913 in order to irrigate sugar cane, but the sugar production ended in 1995, prompting the Hawaiian Water Rights Commission to hold a contested case hearing over continued exports.¹⁹¹ In a 1997 decision, the Commission acknowledged a public trust duty and allocated roughly half of the water in the ditch to

and wildlife, and a common law one for water rights. *Envtl. Protection Info. Ctr. v. Cal. Dept of Forestry & Fire Prevention*, 187 P.3d 888, 926 (Cal. 2008). Wildlife are expressly part of the public trust in California, *Ctr. for Biological Diversity, Inc. v. FPL Group, Inc.*, 83 Cal. Rptr.3d 588 (Cal. Ct. App. 2008); in Oregon, *Kramer v. City of Lake Oswego*, 446 P.3d 1, 12 n.12 (Or. 2019); and in most other states. *See Blumm & Paulson*, 2013 UTAH L. REV. 1., at app. (cataloguing 47 states’ declarations of the public trust in wildlife).

187. *Envtl. Law Found. v. State Water Res. Control Bd.*, 237 Cal.Rptr.3d 393 (Cal. Ct. App. 2018), *aff’g* Superior Court, Sacramento County, No. 34201080000583 (2014).

188. *King v. Oahu, Railway & Land Co.*, 11 Haw. 117, 125 (Haw. 1899) (“[T]he people of Hawaii hold the absolute rights to all its navigable waters and the soils under them for their own common use. The lands under the navigable waters in and around the territory of the Hawaiian government are held in trust for the public uses of navigation.”).

189. Haw. Const., Art. XI, §1: “For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii’s natural beauty and all natural resources, including land, water, air, minerals and energy resources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people.”

190. *In re Water Use Permit Applications (Waiahole Ditch)*, 9 P.3d 409 (Haw. 2000); *see* Symposium, *Managing Hawaii’s Public Trust Doctrine*, 24 U. HAWAI’I L. REV. 1 (2001).

191. *See id.* at 423–25.

leeward agriculture and the rest to instream flow.¹⁹² The Hawai'i Supreme Court reversed.¹⁹³

The court provided a veritable treatise on the Hawaiian PTD, explaining in some detail both the scope and substance of the doctrine. First dispelling the state's claim that the state water code subsumed the PTD, the court explained that the state has powers and duties that it cannot legislatively abrogate.¹⁹⁴ One of these was the PTD, an "inherent attribute of sovereign authority that the government . . . cannot surrender."¹⁹⁵ Instead of the PTD being subsumed by the water code, the court used the public trust as means of interpreting the code, defining its limits, and "justify[ing] its existence."¹⁹⁶ The court declared that the PTD applied to both ground and surface water, discounted the lack of historic groundwater use by Native Hawaiians, and announced the flexibility of the doctrine as capable responding "to changing needs and circumstances."¹⁹⁷

The court explained the first duty of the sovereign trustee was to protect public waterbodies for public access and use, including traditional public rights of navigation, commerce, and fishing, as well as recreation and preserving waters in their natural state.¹⁹⁸ But the court also recognized that there was tension between non-consumptive trust uses and consumptive water uses, particularly domestic drinking water, a trust purpose, as well as Native Hawaiian customary uses, also trust uses.¹⁹⁹

The court emphatically rejected the notion that economic development was a trust use.²⁰⁰ Although the state could permissibly consider the economic benefits of private water diversions, the court emphasized that the commission's PTD duty was "to maintain the *purity of flow* of our waters for future generations and to assure that waters of our

192. See *id.* at 430 (allocating roughly 14 million gallons per day (gpd) for leeward agriculture and 13 million gpd for instream uses).

193. At the time, the Hawai'i Supreme Court had jurisdiction over Commission decision appeals.

194. *Waiahole Ditch*, 9 P.3d. at 442–43.

195. *Id.* at 443.

196. *Id.* at 445.

197. *Id.* at 445–47.

198. *Id.* at 448, citing *Illinois Central Railroad v. Illinois*, 146 U.S. 387, 452 (1892).

199. *Id.* at 448–49.

200. *Id.* at 450. The court observed that for the PTD to have meaning and effect, public rights in trust resources must be recognized as distinct and superior to competing private interests. *Id.* ("[I]f the public trust is to retain any meaning and effect, it must recognize enduring public rights in trust resources separate from, and superior to, the prevailing private interests in the resources at any given time.").

land are put to *reasonable and beneficial uses*.²⁰¹ Fulfilling the trust requires that “any balancing between public and private purposes begin with a presumption in favor of public use, access, and enjoyment.”²⁰² Consequently, private commercial uses require a higher level of judicial scrutiny, with the burden on the private interest to justify the use.²⁰³ Since judicial review of trust resources decisions “provides a level of protection against improvident dissipation of an improvident res,” Hawaiian courts must take a “close look” at legislative or administrative decisions to ensure compliance with the trust.²⁰⁴

In a pathbreaking interpretation of the PTD, the Hawai’i Supreme Court announced that the doctrine included the “precautionary principle,” under which the government trustee must not wait for scientific certainty to take remedial action to protect trust resources.²⁰⁵ In fact, the court urged the Commission to adopt “margins of safety” for instream uses.²⁰⁶

The court sent the case back to the Commission, and the case bounced around between the Commission and the court for several years. Then, a 2006 Commission decision reserved roughly equal proportions between the windward and leeward users of around 12 million gallons per day (mgd) each, with the remaining 2.47 mgd instream until needed for out-of-stream diversions, which prompted a dissent.²⁰⁷ In 2010, the

201. *Id.* (emphasis in original). The dual nature of the commission’s duties is due to the Hawaiian constitutional language, which requires the state to “conserve and protect” Hawai’i’s natural resources and “promote the development and utilization of these resources in a manner consistent with their conservation and the self-sufficiency of the State.” HAW. CONST., art. XI, § 1.

202. *Waiahole Ditch*, 9 P.3d at 442. The court singled out three priority trust uses of Hawai’i’s waters: (1) domestic uses; (2) Native Hawaiian customary uses; and (3) maintenance of waters in their natural state. *Id.* at 448–49. Drinking water for domestic use is the highest priority use because of “founding principles of the ancient Hawaiian system.” *Id.* at 451.

203. *Id.* at 453. The court noted that although the Commission’s decisions enjoy a presumption of validity, interpreting the obligations imposed by the PTD is a judicial function because PTD decisions are analogous to the duties imposed on private trustees, except that the beneficiaries are present and future generations. *Id.* at 143.

204. *Id.* at 455 (citing *Arizona Ctr. for Law in the Public Interest v. Hassel*, 837 P.2d 158, 168–69 (Ariz. App. 1991); and *Kootenai Env’tl. Alliance v. Panhandle Yacht Club*, 671 P.2d 1085, 1092 (Idaho 1983)).

205. *Waiahole Ditch*, 9 P.3d at 468.

206. *Id.*

207. See *Hawaiian Water Commission Splits Over Waiahole Water Case*, Earthjustice (July 14, 2006), <https://earthjustice.org/news/press/2006.hawai-i-water-commission-splits-over-waiahole-water-case>. The dissent thought the 2.47 mgd should remain in the stream as a margin of safety, as called for by the supreme court. *Id.*

Hawaiian Court of Appeals upheld most of the Commission's decision in rejecting a challenge by windward parties to two water rights the Commission granted to developer while upholding a challenge to a permit to a defunct golf course.²⁰⁸ Pending approval of more off-stream diversions, the leeward streams received a total water allocation of over 15 mgd of a total of an average of about 27 mgd in the Waiahole Ditch system.²⁰⁹

D. Pennsylvania Oil and Gas in Trust

The Pennsylvania Environmental Rights Amendment (ERA) to the state constitution, approved in 1971 by an overwhelming 4–1 popular vote, called for a citizens' right to a clean environment, referred to the

208. In the Matter of Water Use Permit Applications . . . For the Waiahole Ditch Combined Contested Case Hearing, No. CCH-OA95-1 (Haw. Ct. App. Oct. 13, 2010). See *Restore Steam Flow*, EARTHJUSTICE (Apr. 10, 2014), <https://earthjustice.org/features/restore-stream-flow>.

209. See Regina Gregory, *Waiahole Ditch Reservation*, EcoTipping Points Project, July 2018, <http://ecotippingpoints.org/our-stories/indepth/use-hawaii-waihole-ditch-water-restoration.html>. The Hawaiian Supreme Court has issued at least two other two significant PTD decisions concerning Hawaiian waters since its original Waiahole Ditch decision. In re Waiola O Molokai, 83 P.3d 664 (Haw. 2004), largely upheld the state water commission's decision to issue a water use permit to Molokai Ranch for over 650,000 gallons per day of groundwater pumping to implement a 30-year plan to develop low-impact tourism and light industry, along with the company's agricultural and ranching operations. The court concluded that the Commission's decision had fulfilled its PTD duty in balancing the competing demands for groundwater, but the court faulted the commission for failing to require Molokai Ranch to affirmatively show that its proposed use would not interfere with Department of Hawaiian Homes groundwater wells on the island. *Id.* at 694–95. Local opposition to the ranch's development plans subsequently stalled the project, and in 2017 the ranch was put up for sale, but it had not sold by 2019. See Gina Mangieri, *Molokai Ranch sale has community talking public, private options*, KHON2 (Feb. 2, 2019), <https://www.khon2.com/news/always-investigating/molokai-ranch-sale-has-community-talking-public-private-options>. In a second case, *Kauai Springs v. Planning Comm'n of County of Kauai*, 324 P.3d 951 (Haw. 2014), the Hawaiian Supreme Court upheld the county's decision to shut down Kauai Springs' water bottling operations due to violations of county zoning ordinances, reversing a contrary circuit court decision. The supreme court ruled that the county planning commission had authority under the PTD to investigate Kauai Springs' bottling operations for commercial use, and the doctrine imposed an affirmative duty on the company to demonstrate that its use was not harming trust uses like drinking water or other domestic uses, Native Hawaiian customary uses, maintenance of waters in their natural state, and existing lawful reservations of water. *Id.* at 982. See generally Ana Ching, *Charting the Boundaries of Hawaii's Public Trust Doctrine Post-Waiahole Ditch* (draft, 2020).

state's public natural resources as common property of all the people, including future generations, and expressly recognized the state as trustee of the state's resources with an obligation to conserve and maintain them.²¹⁰ The Pennsylvania Commonwealth Court quickly undercut the ERA in a case concerning a street widening project that consumed some parkland in 1973 by ruling that all the ERA required was (1) compliance with applicable statutes, (2) a reasonable effort to reduce environmental harm to a minimum, and (3) the harm "clearly outweigh" the benefits of proposed projects.²¹¹ Although the state supreme court affirmed the lower court's decision, the high court never adopted the Commonwealth Court's three-part reasoning, and in two recent decisions involving oil and gas production overturned the test.

In 2012, the state legislature amended the state Oil and Gas Act to permit "optimal development" of oil and gas in response to a widespread boom in production caused by hydraulic fracturing.²¹² The amendments displaced local zoning restrictions in favor of a statewide "use of right" everywhere, including residential, commercial, and industrial zones.²¹³ Citizens and local governments challenged the amendments as violating the state's PTD, and a plurality of the state supreme court agreed.²¹⁴

Four years later, a majority of the Pennsylvania Supreme Court invoked the reasoning of the *Robinson* plurality in reversing the Commonwealth Court's reluctance to interfere with state legislative

210. PA. CONST. art. I, § 27: "The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generation yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

211. *Payne v. Kassab*, 312 A.2d 86 (Pa. Commw. Ct. 1973), *aff'd*, 361 A.2d 263 (Pa. 1976).

212. *See* 58 PA.C.S. §§ 2301–3504 (West 2012).

213. *See Robinson Twp. v. Pennsylvania*, 83 A.3d 901, 914–15 (Pa. 2013).

214. *Id.* at 981–82 (deciding that the amendments were incompatible with the ERA because "the degradation of the corpus of the natural resources trust, having disparate impact" on some citizens, violated the state's fiduciary duties of prudence, loyalty, and impartiality); *see also id.* at 957 (discussing the fiduciary duties of prudence, loyalty, and impartiality). The plurality based its opinion on the PTD embodied in § 27 of the state constitution, although—of perhaps greater interest outside Pennsylvania—the court also noted that the PTD was enforceable under Art. I, § 1 of the constitution, which recognizes and preserves citizens' inherent rights, *id.* at 948. A concurrence based its finding of unconstitutionality on substantive due process. *Id.* at 1001 (Baer, J. concurring). For a thorough discussion of the *Robinson Township* decision, *see* John C. Dernbach, *The Potential Meanings of a Constitutional Public Trust*, 45 ENVTL. L. 463, 478–517 (2015).

appropriation decisions.²¹⁵ In response to budget shortfalls, the state had redirected some \$335 million from funds generated by oil and gas leases—funds that had been earmarked for natural resources conservation—to the state’s general fund.²¹⁶ The court ruled that the fund was part of the corpus of the public trust, and that the state’s fiduciary obligations required the state to use the fund only for natural resources conservation.²¹⁷ The court also confirmed that the ERA was self-executing without the need for implementing legislation.²¹⁸ Thus, the state’s use of trust assets for non-trust purposes was “a clear violation of the most basic of a trustee’s fiduciary obligations.”²¹⁹ Applying the PTD to a legislative appropriation decision was unprecedented, and the invocation of private trust principles was potentially groundbreaking.²²⁰

E. The Atmospheric Trust Cases

In a group of cases perhaps beyond Sax’s 1970’s vision, the nonprofit group Our Children’s Trust has coordinated a series of domestic and international suits in an effort to force governments to curb greenhouse gas (GHG) emissions.²²¹ The suits claim that unregulated GHG emissions damage trust resources, including the atmosphere and affected waterbodies, and that governments have inherent duties to protect those resources for present and future generations. This section surveys both domestic and international suits.

215. *Pennsylvania Env’tl. Defense Foundation v. Commonwealth*, 161 A.3d 911 (Pa. 2017) (relying on *Robinson Township*).

216. *Id.* at 930–32.

217. *Id.* at 933–35, 937–38.

218. *Id.* at 937–38. The court determined that royalties from oil and gas production are part of the corpus of the trust but sent back to the lower courts to determine whether rents and bonus bids are similarly part of the corpus. *Id.* at 935.

219. *Id.* at 939.

220. *Id.* at 931 n.23 (applying duties of prudence and loyalty). On the role of private trust principles in public trust decision-making, see John C. Dernbach, *The Role of Trust Law Principles in Defining Public Trust Duties to Natural Resources*, 54 U. MICH. J. L. REFORM 77 (2020) (suggesting that the duties of conservation easement trustees are more appropriate for interpreting the PTD than private trustee duties).

221. See Mary Christina Wood, *Atmospheric Trust Litigation Across the World*, in FIDUCIARY DUTY AND THE ATMOSPHERIC TRUST, chap. 6 (Ken Coghill, Charles Sampford & Tim Smith, eds., 2012); Our Children’s Trust, ourchildrenstrust.org (last visited Mar. 31, 2020) (cataloguing ongoing proceedings in all 50 states and in over a dozen countries).

I. U.S. Cases

Results of atmospheric trust cases in the U.S. to date have been mixed. A federal district court rejected one suit because it decided that the PTD did not apply to the federal government.²²² The court misinterpreted a federal Supreme Court opinion in a case that did not involve a PTD claim at all.²²³ A Texas state court vacated a lower court decision in favor of PTD plaintiffs for lack of standing on the ground that neither the state Administrative Procedure Act nor the Water Code provided for judicial review of the denial of a petition for rulemaking to regulate greenhouse gas emissions by the Texas Commission on Environmental Quality.²²⁴

The signature case upholding an atmospheric trust litigation (ATL) claim is the federal District Court of Oregon's decision in *Juliana v. United States*, denying the federal government's motion to dismiss the case.²²⁵ The court held that if the youth plaintiffs could show that the government knew for a half-century about the dangers of GHG emissions in the atmosphere and did nothing to prevent the danger,²²⁶ the plaintiffs could prevail on a claim that their constitutional and public trust rights had been violated.²²⁷

222. *Alec L v. Jackson*, 863 F. Supp. 2d 11 (D.D.C. 2012). The district court decision was affirmed in an unpublished opinion, 561 F.Appx. 7 (D.C. Cir. 2014).

223. In *PPL Montana v. Montana*, 565 U.S. 576 (2012), the Court decided that the Montana Supreme Court employed an improper test for determining whether a river was title-navigable, a federal test based on river segments. On the district court's errors, see Michael C. Blumm & Lynn S. Shaffer, *The Federal Public Trust Doctrine: Misinterpreting Justice Kennedy and Illinois Central Railroad*, 45 ENVTL. L. 399 (2015).

224. *Bonser-Lane ex rel TVH v. Texas Comm'n on Env'tl. Quality*, 438 S.W.2d 887, 895 (Tx. App. 2014); *see also, e.g., Sanders-Reed ex rel. Sanders-Reed v. Martinez*, 350 P.3d 1221 (N.M. Ct. App. 2015) (finding that the courts cannot impose a public trust duty upon the state to regulate greenhouse gas emissions); *Funk v. Wolf*, 144 A.3d 228 (Pa. Commw. Ct. 2016) *aff'd* 158 A.3d 642 (mem.) (Pa. 2017) (holding that the state's Environmental Rights Amendment did not obligate the state to regulate greenhouse gas emissions).

225. 217 F. Supp. 3d 1224 (D. Or. 2016), *overruled on standing grounds*, 447 F.3d 1159 (9th Cir. 2020).

226. Indeed, the plaintiffs claimed that despite knowledge of the danger posed by GHG emissions, the federal government "permitted, encouraged, and otherwise enabled" fossil fuel development and use. *Id.* at 1233.

227. *Id.* The court rejected government claims that the case involved a non-justiciable political question and that the plaintiffs lacked standing. *Id.* 1242, 1248.

The court ruled that the plaintiffs constitutional rights were grounded in due process, as the right to a stable climate was no less a fundamental liberty right than the right to marry.²²⁸ Tracing the origins of the PTD to Roman law,²²⁹ as well as being implicit in due process, the court described the public trust as “the fundamental understanding that no government can legitimately abdicate its core sovereign powers.”²³⁰ Characterizing the PTD as an inherent aspect of sovereignty, like the Pennsylvania Supreme Court,²³¹ the decision invoked private trust principles to interpret public trust duties.²³²

As for whether the atmosphere was a trust resource, the court decided that such a declaration was unnecessary, since rising ocean temperatures and acidification were sufficient to show that GHG emissions damaged acknowledged trust resources like tidelands and the ocean.²³³ The court also rejected the argument that the PTD was inapplicable to the federal government, finding that that contention to be “implausible,” since “public trust obligations are inherent aspects of sovereignty,” and would therefore apply to both sovereign states and the federal government.²³⁴ Inherent in sovereignty, the PTD was not created by the Constitution but was instead a preexisting governmental duty, just as due process duties to protect rights to life, liberty, and property.²³⁵ Agreeing with the Pennsylvania Supreme Court, the *Juliana* district court equated the sovereign trust limitation imposed by the PTD with the sovereign police power, as both are inherent limits and powers, and neither is alienable.²³⁶ The trial that the court approved was blocked by a divided Ninth Circuit, which ruled that the youth plaintiffs lacked standing due to

228. *Id.* at 1250, citing *Obergefell v. Hodges*, 135 S. Ct. 2584 (2015) (finding the right to marry to be a liberty right protected by the due process clause).

229. *Juliana*, 217 F. Supp. 3d at 1253–54, also citing *Arnold v. Mundy*, 6 N.J.L. 1, 42 (1821), and *Illinois Central Railroad v. Illinois* 146 U.S. 387 (1892).

230. *Juliana*, 217 F. Supp. 3d at 1252.

231. *See supra* note 220 and accompanying text.

232. *Juliana*, 217 F. Supp. 3d at 1253–54, citing RESTATEMENT (SECOND) OF TRUSTS § 183 (1959); GEORGE G. BOGERT ET AL., BOGERT’S TRUSTS AND TRUSTEES, § 582 (updated June 2019).

233. *Juliana*, 217 F. Supp. 3d at 1256.

234. *Id.* at 1257. Similarly, the fact that trust obligations were inherent in sovereignty dissuaded the court from ruling that the federal pollution control statutes displaced the PTD, distinguishing *American Electric Power v. Connecticut*, 564 U.S. 410 (2010) (holding that the Clean Air Act displaced federal common law nuisance claims against major GHG emitters). The decision explained that PTD obligations cannot be legislated away. *Id.* at 1260.

235. *Id.* at 1261.

236. *Id.*

a limited judicial institutional capacity to oversee the design and implementation of a climate remedial plan.²³⁷

The Ninth Circuit's dismissal of the case was not a judgment on its merits. The court determined that "[t]he plaintiffs have made a compelling case that action is needed," and that "it will be increasingly difficult for the political branches to deny that climate change is occurring; that the government has had no role in causing it, and that our elected officials have a moral responsibility to seek solutions."²³⁸ Although the court averred that "[w]e do not dispute that the broad judicial relief the plaintiffs seek could well goad the political branches into action," the majority decided "[t]hat the other branches may have abdicated their responsibility to remediate the problem does not confer on Article III courts, no matter how well-intentioned, to step into their shoes," as the issues were committed to the political branches of government.²³⁹ Consequently, the court "reluctantly conclude[d] . . . the plaintiffs' case must be made to the political branches or to the electorate at large."²⁴⁰ The Ninth Circuit based its standing ruling on an unprecedented, and arguably impermissible, invocation of the political question doctrine.²⁴¹ A dissent agreed that "[n]o case can singlehandedly prevent the catastrophic effects of climate change," but maintained that a federal court need not manage at the details of implementing a climate-change plan to "offer real relief," and the fact that the suit could not "alone halt climate change does not mean that it presents no claim for judicial resolution."²⁴²

2. *International Cases*

Courts abroad have not felt constrained by restraints like the political question doctrine. Their proliferating jurisprudence has moved the scope of the public trust considerably beyond the majority of U.S. jurisdictions and perhaps even beyond Professor Sax's half-century old vision. We examine some of the more notable decisions in this section.

237. 947 F.3d 1159 (9th Cir. 2020) (importing the political question doctrine into standing analysis).

238. *Id.* at 1175.

239. *Id.*

240. *Id.*

241. A law professors' amicus brief maintained that the political question doctrine has no role in standing analysis when there are manageable and discrete standards to resolve plaintiffs' claims. Amicus Br. of Law Professors in Supp. of Pls' Pet. for An En Banc Hr'g in *Juliana v. United States*, March 11, 2020, No. 18-36082.

242. *Juliana*, 947 F.3d at 1175 (Stanton, J., dissenting).

a. India

In a case with striking resemblance to *Illinois Central* and its undertones of corruption, the Indian Supreme Court relied on Sax's "erudite article"²⁴³ to hold that a state government's lease of ecologically fragile land to a resort violated the PTD.²⁴⁴ For five years, the government had refused a resort's requests to lease additional land.²⁴⁵ But in 1993, when Kamal Nath, whose family had ties to the resort, became Minister of the Department of Environment and Forests, the government approved the lease, a reversal which the Court concluded "[s]urely . . . cannot be a coincidence."²⁴⁶

The resort began substantial construction on the Beas River, redirecting its flow to prevent flooding at the resort.²⁴⁷ Drawing extensively on Sax's article in examining the Roman and English origins of the PTD and its American application,²⁴⁸ the court determined that the PTD was grounded in natural law.²⁴⁹

The Court ruled that the government cannot abdicate its authority over public trust resources by converting them to private ownership or commercial use and incorporated Sax's principle of judicial skepticism into its analysis.²⁵⁰ Subsequent decisions from the India Supreme Court have continued to rely on Sax to reinforce and elaborate on India's PTD,²⁵¹ finding the PTD to be constitutionally enshrined in due process,²⁵² and expanding the *res* of the PTD.

243. M.C. Mehta vs. Kamal Nath & Others, (Dec. 12, 1996) 1 S.C.C. 388, at *14 (India), <https://indiankanoon.org/doc/1514672/>.

244. *Id.* at *19.

245. *Id.* at *7–8.

246. *Id.* at *7.

247. *Id.* at *2.

248. The court referenced, in some detail, *Illinois Central*, *Gould v. Greylock*, and *Mono Lake*, as well as several other cases examined by Sax in his 1970 article. *Id.* at *16–18.

249. *Id.* at *13 (“[a]n understanding of the laws of nature must therefore inform all of our social institutions”).

250. *Id.* at *18.

251. See, e.g., *M.I. Builders Private, Ltd. v. Radhey Shayam Sahu*, (1999) 6 S.C.C. 464 (India) (enjoining construction of an underground shopping center located in a public park); *Fomento Resorts & Hotels v. Minguel Martins*, 1 N.S.C. 100 (India 2009) (finding a violation of the PTD when a resort constructed facilities that blocked a public path to a public beach); *Reliance Nat. Res. Ltd. v. Reliance Indus. Ltd.*, 7 S.C.C. 129 pt. I, ¶ 11 (India 2010) (applying the PTD to natural gas deposits); see also Blumm & Guthrie, *Internationalizing*, *supra* note 15, at 760–65.

252. *M.I. Builders*, 6 S.C.C. at 466.

b. The Philippines

The Philippines Constitution requires the government to “protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.”²⁵³ In 1990, Filipino schoolchildren filed a class action lawsuit challenging timber licenses granted by the Department of Environment and Natural Resources.²⁵⁴ After the trial court’s dismissal for lack of a specific legal right to sue, the Philippines Supreme Court reversed, finding a valid claim under the constitutional language, enabling the schoolchildren to file a class action lawsuit on behalf of themselves as well as succeeding generations.²⁵⁵ Rejecting an argument that logging was better suited for the legislative or executive branches, the Court declared that the right to a balanced and healthful ecology “belongs to a different category of rights altogether for it concerns nothing less than self-preservation and self-perpetuation . . . which may even be said to predate all governments and constitutions.”²⁵⁶ This public right imposes a “correlative duty to refrain from impairing the environment.”²⁵⁷

Oposa turned out to be an empty endorsement of the PTD in terms of logging.²⁵⁸ But egregious pollution of Manila Bay, a popular tourist destination, prompted the Supreme Court of the Philippines to issue a far-reaching order in 2008 that extended to dozens of agencies and called for environmental public education.²⁵⁹ In *Metro Manila Development Authority v. Concerned Citizens of Manila Bay*, the court reiterated *Oposa*’s recognition of a natural right to a “balanced and healthful ecology” and rejected the agencies’ argument that statutory provisions

253. CONST. art. II, § 16 (Phil.)

254. *Oposa v. Factoran, Jr.*, G.R. No. 101083, 174, 177 (S.C., Jul. 30, 1993) (Phil.).

255. *Id.*

256. *Id.* at 188.

257. *Id.*

258. Although the *Oposa* decision was a ringing endorsement of the PTD as an inherent in the Constitution as well as a natural right, the Court failed to enjoin the logging, which continued on largely unabated. See Dante B. Gatmaytan, *The Illusion of Intergenerational Equity: Oposa v. Factoran as a Pyrrhic Victory*, 18 GEO. INT’L ENVTL. L. REV. 457 (2003).

259. *Metro. Manila Dev. Auth. v. Concerned Residents of Manila Bay*, G.R. Nos. 171947–48 574 S.C.R.A. 661 (S.C. 2008) (Phil.) (*Metro Manila*), https://lawphil.net/judjuris/juri2008/dec2008/gr_171947_2008.html; see Presbitero J. Velasco, Jr., *Manila Bay: A Daunting Challenge in Environmental Rehabilitation and Protection*, 11 OR. REV. INT’L L. 441 (2009) (Associate Justice of the Supreme Court of the Philippines and author of the *Metro Manila* decision, describing the remedy the Court ordered); see also Blumm & Guthrie, *supra* note 15, at 770–76.

protecting Manila Bay were discretionary. Instead, the court found the duties to be obligatory and issued a writ of mandamus, forcing compliance with the statutes.²⁶⁰

c. Africa: Kenya, Uganda, and South Africa

Several courts in African nations have located the PTD within their constitutions, all of which were ratified relatively recently and include protections for the environment and natural resources.²⁶¹ For example, the High Court of Uganda held that the Ugandan federal government breached the PTD in granting a 50-year permit to a sugar refinery, allowing the refinery to clear a forest for plantation lands.²⁶² Notably, the project faced strong opposition from the local community, and the court interpreted the PTD to require local consent, along with federal consent.²⁶³

In Kenya, the High Court at Nairobi expounded on the PTD in a 2006 criminal case in which the government sought sanctions against polluters discharging raw sewage into the Kiserian River.²⁶⁴ Although the court found the proceedings to violate due process because the government only sought sanctions against twenty-three of approximately 100 dischargers, the court took up the PTD on its own motion and ordered the Ministry of Water to construct a treatment plant.²⁶⁵ The Kenyan court interpreted the PTD to be part of Kenya constitutional right to life, holding “[t]he right to a clean environment is primary to all creatures, including man. It is inherent from the act of creation, the recent restatement in the Statutes and Constitutions of the world notwithstanding.”²⁶⁶ Kenya

260. *Metro Manila*, 574 S.C.R.A. at *11–13. In particular, the Court ordered compliance with § 25 of the Local Government Code of 1991, requiring that “the President shall exercise general supervision over local government units to ensure that their acts are within the scope of their prescribed powers and functions,” as well as several provisions of the country’s Clean Water Act and other pollution control provisions. *Id.*

261. *See* Constitution of the Republic of Uganda [CRU] art. 13; *id.* arts. 26, 42, 46 (2010) (Kenya); S. AFR. CONST., 1996; *see also* Blumm & Guthrie, *supra* note 15, at 777–94.

262. *Advocates Coal. for Dev. & Env’t v. Att’y Gen. (ACODE)*, Misc. Cause No. 0100 of 2004 (July 11, 2005) (Uganda).

263. *Id.*

264. *Waweru v. Republic*, (2006) 1 K.L.R. 677, 677 (H.C.K.) (Kenya).

265. *Id.* at 692.

266. *Id.* at 687.

subsequently ratified a new constitution in 2010 which included provisions expressly incorporating PTD principles.²⁶⁷

The PTD is also deeply rooted in South Africa's 1996 Constitution, which contains broad public trust language within its bill of rights.²⁶⁸ The constitution imposes affirmative duties to protect the environment, and the South African legislature has enacted several environmental statutes that expressly incorporate the PTD.²⁶⁹ These statutes codify an expansive public trust that incorporates both traditional and non-traditional resources.²⁷⁰

d. The Netherlands

In a landmark decision from The Netherlands, the Dutch Supreme Court affirmed an appellate decision holding that the Dutch government's carbon-emissions reduction target for 2020 was inadequate to prevent dangerous climate change.²⁷¹ Prior to 2011, the Netherlands had adopted a target of 30 percent carbon emission reductions, but adjusted it down to 20 percent to match the European Union-wide 20 percent reduction target.²⁷² The Urgenda Foundation claimed this carbon reduction target was not an ambitious enough goal to prevent dangerous climate change, relying on extensive scientific data and treaty obligations to demonstrate the necessity of keeping atmospheric carbon dioxide concentrations below

267. CONST. arts. 26, 42, 46 (2010) (Kenya).

268. S. AFR. CONST., 1996, § 24 (“Everyone has the right to an environment that is not harmful to their health or wellbeing; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that—(i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”).

269. National Environmental Management Act 107 of 1998 (“NEMA”) § 2(4)(o) (S. Afr.); National Water Act 36 of 1998 § 3(1) (S.Afr.); Mineral and Petroleum Resources Development Act 28 of 2002 (S. Afr.); National Environmental Management: Biodiversity Act of 2004 § 3(a) (S. Afr.); see Blumm & Guthrie, *supra* note 15, at 788–91.

270. *Id.*; see also David Takacs, *The Public Trust Doctrine, Environmental Human Rights, and the Future of Private Property*, 16 N.Y.U. ENVTL. L.J. 711, 740–47 (2008).

271. *The State of the Netherlands v. Urgenda Foundation*, Supreme Court of the Netherlands, ECLI:NL:PHR:2019:102 (2019) (“*Supreme Court Decision*”), *aff'g* *State of the Netherlands v. Urgenda Foundation*, Hague Court of Appeals, ECLI:NL:RBDHA:2015:7196 (2018) (“*Urgenda? Court of Appeals Decision*”).

272. *Urgenda Court of Appeals Decision*, at ¶ 21.

450 parts per million.²⁷³ The court held that articles 2 and 8 of the European Convention on Human Rights (ECHR) required the Dutch government “to take measures to counter the genuine threat of dangerous climate change.”²⁷⁴

Although the Supreme Court opinion contained less explicit PTD language, focusing more on separation of powers issues, the opinion affirmed the Court of Appeals’ reasoning, which had interpreted the right to life articulated in articles 2 and 8 of the ECHR as imposing a duty of care requiring “concrete actions to prevent a future violation of these interests.”²⁷⁵ The court found the Dutch government’s downward adjustment of its emissions target was a violation of its public trust duties because the government had previously obligated itself to a greater reduction by treaty.²⁷⁶ Addressing the state’s argument that the order to achieve a 25 percent reduction by 2020 amounted to a legislative order beyond the court’s jurisdiction, the Supreme Court held that the order provided the government with sufficient discretion in enacting specific legislative measures to withstand separation of powers arguments.²⁷⁷ This decision was a sharp contrast to the Ninth Circuit’s *Juliana* decision, in which the court held that the injunctive relief sought by the plaintiffs was beyond the institutional capacity a court could impose on the federal government.²⁷⁸

e. Pakistan

Pakistan courts have found the PTD to be embedded within that country’s constitutional right to life, which includes protection of environmental health.²⁷⁹ The Pakistan Supreme Court first recognized the PTD in a 1992 decision, *In re Human Rights Case (Balochistan)*.²⁸⁰ In

273. *Id.* at ¶ 3.8, 4–18.

274. *Urgenda Supreme Court Decision*, at ¶ 5.6.2; Article 2 of the ECHR protects the right to life and Article 8 protects the right to respect for private and family life, both of which, according to the Court, relate to environmental issues. *Id.* at ¶ 5.6.2–5.6.3.

275. *Urgenda Court of Appeals Decision*, at ¶ 41.

276. *Id.* at ¶ 73.

277. *Id.* at ¶ 8.2.7.

278. *Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020), *rev’g* *Juliana v. United States*, 217 F. Supp. 3d 1224 (D. Or. 2016); *see also State of Netherlands v. Urgenda Foundation*, 132 HARV. L. REV. 2090 (2019) (discussing the court of appeals decision).

279. PAKISTAN CONST. ART. 9 (“[n]o person shall be deprived of life or liberty save in accordance with law”); *see* Blumm & Guthrie, *supra* note 15, at 766–70.

280. (1992) 1994 PLD (SC) 102 (Pak.).

Balochistan, a case of original Supreme Court jurisdiction in response to a newspaper article describing proposed dumping of nuclear and industrial waste in coastal areas,²⁸¹ the Supreme Court held that the environmental harm caused by the dumping would be a violation of Article 9 of the Constitution, implying that the right to life includes the right to a healthy environment.²⁸²

In 2015, a Pakistan appellate court, in *Leghari v. Federation of Pakistan*, relied on the same fundamental principle in deciding not only that climate inaction by the government was a violation of Article 9.²⁸³ The court proceeded to issue a directive to create government institutions to address climate change,²⁸⁴ including a Climate Change Commission and appointed 21 high-level cabinet officials to the commission.²⁸⁵ A group of Pakistani women recently filed a lawsuit, relying on *Leghari*, alleging that Pakistani government's inaction on climate violated their right to life as well as that of future generations.²⁸⁶

f. Colombia

In Colombia, a group of children prevailed on their claim that the government's failure to reduce deforestation and address climate change violated their fundamental rights.²⁸⁷ In *Future Generations v. Ministry of Environment and Others*, the plaintiffs asked the court to enjoin the development of an area of the Amazon rainforest due to the forest's role as a carbon sink critical to prevent drastic climate change.²⁸⁸ The Supreme Court reversed the lower court decision, holding that the right to life is "substantially linked and determined by the environment and the ecosystem."²⁸⁹

281. *Id.* at ¶ 1.

282. *Id.* "No person shall be deprived of life or liberty save in accordance with law." PAKISTAN CONST. art. 9.

283. (2016) W.P. No. 25501/2015 at *1–2, *4 (Pak.).

284. *Id.* at *6–7.

285. *Id.*

286. *See* Maria Khan et al. v. Federation of Pakistan et al. Writ Petition No. 8960 of 2019 (Lahore High Court) (Pakistan).

287. Corte Suprema de Justicia [C.S.J.][Supreme Court], Apr. 15, 2018, Radicación n. 11001 22 03 000 2018 00319 00 (Colom.), <http://climatecasechart.com/non-us-case/future-generation-v-ministry-environment-others/>.

288. *Id.*

289. *Id.* at 13. The available English translation of this opinion does not explicitly ground the decision in Colombia's Constitution, but the opinion relies on the *Atrato River* case, which recognized natural resources as being protected by the constitution.

Like the *Urgenda* court, the Colombia Supreme Court relied on treaty obligations and scientific data, as well as the precautionary principle, to rule in favor of the plaintiffs.²⁹⁰ The court ordered the government to collaborate with the plaintiffs to formulate a plan to combat illegal deforestation.²⁹¹

VI. CONCLUSION—THE FUTURE OF THE PTD

Professor Sax's celebrated 1970 article foreshadowed much of the surprising development of the PTD during the past half-century, even though the article did not emphasize the rapid 19th century expansion of the scope of the doctrine inland that had moved the doctrine beyond coastal tidewaters.²⁹² Nor did Sax anticipate the expansion of the doctrine to waterways traditionally considered to be non-navigable.²⁹³ Had Sax accounted for these developments, his prognosis for the future might have been more robust, although the doctrine's great influence in India was hardly foreseeable.²⁹⁴

290. *Id.*

291. *Id.* at 45. Earlier, in 2016, the Colombian Constitutional Court upheld a citizen challenge to government inaction concerning illegal logging and mining of the Atrato River Basin. The court interpreted the Constitution as establishing "a fundamental obligation of the State and society to ensure the care of our natural resources," recognized biocultural rights of ethnic communities, and declared there was a fundamental right to water. The court recognized the Atrato River as a legal person with rights to protection and restoration, adopted the precautionary principle concerning ecological preservation, and made numerous references to the need to safeguard the rights of future generations. To protect these fundamental rights, the court issued numerous structural injunctions, including calling for legal guardians to represent the river, an independent commission of experts, watershed restoration plans, and plans to revive local communities' ability obtain clean subsistence and farming. *See* Center for Social Justice v. Presidency of the Republic, Judgment T-622/16 (Const. Ct. Colombia 2016). Rights of nature were also recognized by an India High Court in 2017, in the so-called Glaciers Decision, remarking that "Rivers, Forests, Lakes, Water Bodies, Air, Glaciers and Springs have a right to exist, persist, maintain, sustain and regenerate their own vital ecology system. The rivers are not just water bodies. They are scientifically and biologically living." Invoking *parens patriae* jurisdiction, the court gave "personhood" status to glaciers, rivers, streams, other waterbodies, jungles, forests, and grasslands to preserve and conserve them. *Miglani v. State of Uttarakhand*, Writ Pet. 140 (High Court of Uttarakhand, 2017).

292. *See supra* notes 51–74 and accompanying text.

293. *See supra* notes 75–87 and accompanying text.

294. Sax's article itself had great influence internationally, forming part of the bedrock of the India Supreme Court's *M.C. Mehta v. Kamal Nath* decision, 1 S.C.C. 388, at *16–21 (1997) (declaring the public trust doctrine part of "the law of the land" and striking down a land lease for a resort along the Beas River and ordering

Predicting the future is a hazardous enterprise, but one prediction that seems a safe bet is that the PTD in many jurisdictions will continue to expand to include more trust resources: not only traditionally non-navigable waters,²⁹⁵ but also terrestrial resources such as wildlife, wildlife habitat,²⁹⁶ parklands,²⁹⁷ and perhaps forest resources²⁹⁸ seem likely additions to the trust *res*. This expansion could develop judicially or statutorily or, as increasingly occurring abroad, constitutionally. Apart from constitutional interpretations, the expansion might result from so-called “tributary analysis,” under which a resource is subject to the public trust if it would adversely affect an acknowledged trust resource. This approach has already led courts to extend the trust *res* to beaches, non-navigable streams, groundwater, and the atmosphere.²⁹⁹ Tributary analysis, if taken seriously scientifically, should lead to an ecological *res*, extending to all significant ecological resources.³⁰⁰

Tributary analysis will not, however, lead courts to apply the PTD to the federal government. That application will depend on a reassessment of statements of Supreme Court dicta concerning a 1926 decision of the Court as construing the lodestar decision of *Illinois Central* to be grounded in state law.³⁰¹ Properly interpreted, the PTD is an inherent limit on all sovereigns, including the federal government.³⁰² That recognition would,

restoration of the ecology of the area). *See also* M.I. Builders Private, Ltd. v. Radhey Shayam Sahu, (1999) 6 S.C.C. 464 (India).

295. *See supra* notes 75–86 and accompanying text.

296. *See* Michael C. Blumm & Aurora Paulsen, *The Public Trust in Wildlife*, 2013 UTAH L. REV. 1437 (2013).

297. Parklands are public trust resources in a number of states like New York, Pennsylvania, and Illinois. *See* MICHAEL C. BLUMM & MARY C. WOOD, *THE PUBLIC TRUST DOCTRINE IN ENVIRONMENTAL AND NATURAL RESOURCES LAW* 343–59 (3d ed. 2021) (collecting the case law). The National Park Service Organic Act, 16 U.S.C. § 1(a) (2012), also contains trust language, “[t]he Secretary . . . shall promote and regulate the use of the National Park System . . . in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

298. *See supra* notes 188–210 (discussing *Waiahole Ditch*), note 295 (citing cases from Columbia and India) and accompanying text.

299. *See supra* notes 156–73 (beaches), notes 174–88 (non-navigable streams), notes 189–210 (groundwater), notes 222–43 (the atmosphere).

300. *See generally* Mary Christina Wood, *NATURE’S TRUST: ENVIRONMENTAL LAW FOR A NEW ECOLOGICAL AGE* (2014).

301. *See supra* notes 54–65 and accompanying text. A prescient student paper has deconstructed *Appleby v. City of New York*, 271 U.S. 364 (1926), as an inaccurate foundation for the notion that the public trust doctrine recognized in *Illinois Central* 146 U.S. 387 (1892), was based on Illinois state law. *See* Michael Benjamin Smith, *The Misunderstood Legacy of Appleby v. City of New York and Its Effects on the Federal Public Trust Doctrine* (draft 2020).

302. *See* Blumm & Shaffer, *supra* note 85.

among other things, prevent misguided alienations of federal lands or resources.³⁰³

The trust will also likely be interpreted to include both precautionary and prevention principles.³⁰⁴ The former should reduce the need for scientific proof as a predicate for taking remedial action. The latter would require sovereigns to take affirmative steps to prevent adverse effects on trust resources rather than merely reducing or compensating for adverse effects. The trust's application to government funding decisions will also likely become more commonplace.³⁰⁵

Not to be overlooked are the criteria by which courts judge governments' implementation of trust duties. Private trust principles, like prudence, loyalty, and impartiality, may become more prominent,³⁰⁶ although due to the fact that future generations are beneficiaries of the trust, some modifications of private trust principles seem in order. The duties imposed on conservation easement trustees may be a more appropriate model than private law trustee principles.³⁰⁷ Unlike American courts, foreign courts have not constrained themselves through standing, political question, and separation of powers doctrines.³⁰⁸ Instead, they have readily issued injunctive relief requiring the political branches to establish institutions to implement the public trust. Examples include The Philippines Supreme Court in *Metro Manila*,³⁰⁹ the Pakistan Supreme Court in *Balochistan*,³¹⁰ and the Colombia Constitutional Court in the *Atrato River* case.³¹¹

A fairly well settled area of public trust law is its utility as a background principle defending claims of regulatory takings.³¹² State

303. *Illinois Central*, 146 U.S. at 453.

304. See *supra* notes 189–210 and accompanying text (discussing *Waiahole Ditch*). The *Atrato River* decision, *supra* note 295, contained detailed explanations of why both the precautionary principle and the prevention principle should be part of trust jurisprudence.

305. The landmark case applying the PTD to funding decisions was *Pennsylvania Environmental Rights Foundation*, discussed *supra* notes 211–21 and accompanying text.

306. The bellwether case was again *Pennsylvania Environmental Rights Foundation*, *supra* notes 220–21 and accompanying text (invoking private law principles).

307. See *Dernbach*, *supra* note 215.

308. The Ninth Circuit's decision in *Juliana* serves as a prime example, see *supra* note 269 and accompanying text.

309. See *supra* note 262–63 and accompanying text.

310. See *supra* note 282–85 and accompanying text.

311. See *supra* note 295.

312. See Michael C. Blumm & Rachel G. Wolfard, *Revisiting Background Principles in Takings Litigation*, 71 FLA. L. REV. 1165 (2019), updating and largely

courts have widely embraced the PTD as a background principle, and courts have even recognized trust-like declarations in states concerning ownership of wildlife and water as background principles defenses to takings claims.³¹³ Unless the U.S. Supreme Court redefines the background principles defense recognized by Justice Scalia in *Lucas v. South Carolina Coastal Council*,³¹⁴ the public trust doctrine is likely to serve as a primary takings defense in the years ahead.³¹⁵

The PTD may also be expanded through trust language in several federal statutes. For example, the National Park Service Organic Act requires the National Park Service to “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”³¹⁶ Similarly, several federal statutes authorize designated trustees to seek natural resources damages for water, oil, and hazardous waste pollution.³¹⁷ And

confirming the conclusions reached in Michael C. Blumm & Lucas Ritchie, *Lucas’ Unlikely Legacy: The Rise of Background Principles as Categorical Takings Defenses*, 29 HARV. ENVTL. L. REV. 321 (2005).

313. See Blumm & Wolfard, *supra* note 312, at 1183–86, 1195–1200.

314. 505 U.S. 1003, 1027 (1992). Although the Lucas case has been heralded as establishing the background principles defense, it was actually first recognized Justice Holmes’ decision in *Hudson County Water Co. v. McCarter*, 209 U.S. 349, 356 (1908) (“This public interest is omnipresent wherever there is a state, and grows more pressing as population grows. It is fundamental, and we are of opinion that the private property of riparian proprietors cannot be supposed to have deeper roots. Whether it be said that such an interest justifies the cutting down by statute, without compensation, in the exercise of the police power, of what otherwise would be private rights of property, or that, apart from statute, those rights do not go to the height of what the defendant seeks to do, the result is the same.”).

315. The Court’s decision in *Knick v. Township of Scott*, 139 S. Ct. 2162 (2019), may affect the interpretation of background principles by expanding court review of state regulations alleged to have worked takings. See John D. Echeverria, *Knick v. Township of Scott: A Procedural Boost for Takings Claimants*, 51 ABA TRENDS no. 3 at 7 (2020).

316. National Park Service Organic Act, 16 U.S.C. § 1 (2012).

317. See Federal Water Pollution Control Act 33 U.S.C. § 1321(f)(5) (2012) (“The President . . . shall act on behalf of the public as trustee of the natural resources to recover for the costs of replacing or restoring such resources.”); Oil Pollution Act of 1990 33 U.S.C. § 2706(b)(1) (2012) (“The President . . . shall act on behalf of the public . . . as trustee of natural resources to present a claim for and to recover damages to the natural resources.”); Comprehensive Environmental Response, Liability, and Restoration Act, 42 U.S.C. § 9607(f)(1) (2012) (“The President . . . shall act on behalf of the public as trustee of such natural resources to recover for such damages.”); see also John C. Cruden & Matthew R. Oakes, *The Past, Present, and Future of Natural Resource Damages Claims*, 28 GEO. ENVTL. L. REV. 291

of course the fundamental National Environmental Policy Act (NEPA) contains trust language that has been widely ignored by the courts. Perhaps a court will recognize that Congress intended to establish a federal trust when it established “a national policy to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans . . . fulfill[ing]the responsibilities of each generation as trustee of the environment for succeeding generations.”³¹⁸ If that language were taken seriously by reviewing courts, the results would parallel some of the international decisions that Professor Sax’s article has influenced and more than achieve his vision of a half-century ago.

(2016) (discussing natural resource damage claims, which can only be brought by the trustee responsible for the resource).

318. 42 U.S.C. § 4331 (a) & (b)(1).