Breathing Life into the Public Trust Doctrine: Holding the State Accountable for Protecting the Atmosphere

Joyce Melcar Tan[*]

I. INTRODUCTION

> *The atmosphere and oceans remain quintessential public trust resources that all governments have a fundamental duty to protect.*
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> — Mary Christina Wood & Charles W. Woodward, IV[1]

* '14 M.Sc., University of Edinburgh, '09 J.D., Ateneo de Manila University School of Law. The Author teaches natural resources and environmental law and international environmental and climate change law at the Ateneo de Manila University School of Law. She is also a consultant of the Asian Development Bank for Environmental Law in the Asian region. She previously worked as an Associate at SyCip Salazar Hernandez & Gatmaitan Law Offices.

It has been over 50 years[2] since State institutions in the United States (US) first recognized the threat that climate change brings to our survival, and almost 30 years[3] since thousands of scientists from countries all over the world first convened through the Intergovernmental Panel on Climate Change (IPCC), a body jointly established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to review and assess the latest state of knowledge about climate change and its potential environmental and socio-economic impacts.[4]

As early as 1969, top advisor to US President Richard Nixon and later US Senator, Daniel Patrick Moynihan, wrote a memorandum to former White House Counsel, John Ehrlichman, saying —

> It is now pretty clearly agreed that the [carbon dioxide (CO_2)] content will rise 25[%] by 2000. This could increase the average temperature near the [e]arth's surface by 7[°F]. This in turn could raise the level of the sea by 10

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1. Mary Christina Wood & Charles Woodward IV, *Atmospheric Trust Litigation and the Constitutional Right to a Healthy Climate System: Judicial Recognition at Last*, 6 WASH. J. ENVTL L. & POL'Y. 633, 682 (2016).
2. For example, as early as 1965, the United States (US) government had already released a report displaying its deep understanding of the effects of greenhouse gases, e.g., the melting of Antarctic ice caps, the rising sea levels, the warming of sea waters, the increased acidity of fresh waters, etc. *See* UNITED STATES PRESIDENT'S SCIENCE ADVISORY COMMITTEE, RESTORING THE QUALITY OF OUR ENVIRONMENT: REPORT OF THE ENVIRONMENTAL POLLUTION PANEL, PRESIDENT'S SCIENCE ADVISORY COMMITTEE 112 (1965). *See also* Julia A. Olson & Curtis Morrison, Fifty years ago: The White House Knew All About Climate Change, *available at* http://thehill.com/blogs/congress-blog/energy-environment/259342-fifty-years-ago-the-white-house-knew-all-about-climate (last accessed Jan. 26, 2018).
3. Intergovernmental Panel on Climate Change, Organization (Description and function of the Intergovernmental Panel on Climate Change), *available at* https://www.ipcc.ch/organization/organization.shtml (last accessed Jan. 26, 2018).
4. *Id.*

> feet. Goodbye[,] New York. Goodbye[,] Washington, for that matter. We have no data on Seattle.[5]

Nearly half a century later, CO_2 concentrations did increase as predicted.[6] However, despite clear knowledge of the adverse impacts of continued fossil fuel dependence on atmospheric CO_2 concentrations, and the harms of unabated greenhouse gas (GHG) emissions from fossil fuel combustion (i.e., climate change and its impacts on practically every aspect of our lives), efforts to keep these fuels underground have lagged considerably. Policymakers have not come close to solving the problem; in fact, climate change has since become the biggest moral and legal crisis we face as a human race.[7]

A consensus has formed that politicians have waited far too long to address climate change, [8] and international negotiations have not accomplished nearly enough within the past 25 years by way of concrete action.[9] Although States have been active in annual climate conferences — convening for two weeks every year to review the latest climate science and attempting to agree on how to respond to the climate crisis — these same governments continue to issue permits for fossil fuel extraction and to maintain large subsidies for their fossil fuel industries.[10] States and enterprises have justified their fossil fuel dependence on the need for energy and the lack of viable, commercially feasible alternatives to provide reliable, affordable energy at present.[11]

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5. Memorandum *from* Daniel Patrick Moynihan, Advisor to President Richard Nixon, *to* John Erlichman, White House Counsel (Sep. 7, 1969).

6. *Id. See also* NAOMI ORESKES & ERIK CONWAY, MERCHANTS OF DOUBT: HOW A HANDFUL OF SCIENTISTS OBSCURED THE TRUTH ON ISSUES FROM TOBACCO SMOKE TO GLOBAL WARMING 178 (2010).

7. ORESKES & CONWAY, *supra* note 6, at 2-3. *See also* Mary Christina Wood & Dan Galpern, *Atmospheric Recovery Litigation: Making the Fossil Fuel Industry Pay to Restore a Viable Climate System*, 45 ENVTL L. 259, 265 (2015).

8. Roger Cox, A Climate Change Litigation Precedent: Urgenda Foundation v The State of the Netherlands (Publication for Center International Governance Innovation) *available at* https://www.cigionline.org/sites/default/files/cigi_paper_79web.pdf (last accessed Jan. 26, 2018).

9. Wood & Galpern, *supra* note 7, at 262.

10. Juliana v. U.S., 217 F. Supp.3d 1224 (D. Or. 2016) (U.S.).

11. Alison Riddell, et al., Towards Sustainable Energy: The Current Fossil Fuel Problem and the Prospects of Geothermal and Nuclear Power, *available at*

Frustrated by the slow pace of executive and legislative action worldwide, individuals and civil society organizations have begun turning to the courts to compel co-equal branches of government to get their act together before the window for effective action closes. Cases have been filed in the Netherlands, [12] Norway, [13] Pakistan, [14] and the US, [15] taking policymakers to task for their failure to sufficiently regulate GHG emissions within their territories.

This Article examines a subset of these cases, which has come to be known as atmospheric trust litigation. Unlike torts and nuisance suits, atmospheric trust litigation takes a macro approach and views the atmosphere as a single public trust asset, with States as sovereign co-trustees.[16] As co-trustees, States across the globe bear strict fiduciary duty towards their citizens to maintain the earth's energy balance and thereby keep the world habitable for mankind. [17] Plaintiffs in these cases are thus suing their governments for failure to regulate GHG emissions. This is evidenced by the issuance of permits and subsidies for fossil fuel exploration, development, and utilization, all of which emit massive stores of carbon into the atmosphere. The fundamental issue is the State's breach of its duty to protect natural resources that are necessary for the survival of its present and future citizens — a stable climate system and an atmosphere where the CO_2 concentrations do not threaten inalienable human rights.[18]

Governments are responsible for formulating and implementing policies, as well as regulating access to and use of natural resources within their

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https://web.stanford.edu/class/e297c/trade_environment/energy/hfossil.html (last accessed Jan. 26, 2018).

12. British Broadcasting Corporation, Netherlands ordered to cut greenhouse gas emissions, *available at* http://www.bbc.com/news/world-europe-33253772 (last accessed Jan. 26, 2018).

13. Arthur Neslen, *Norway faces climate lawsuit over Arctic oil exploration plans*, Oct. 18, 2016, GUARDIAN, *available at* https://www.theguardian.com/environment/2016/oct/18/norway-faces-climate-lawsuit-over-oil-exploration-plans (last accessed Jan. 26, 2018).

14. *See* Ashgar Leghari v. Federation of Pakistan, Lahore High Ct., W.P. No. 25501/2015, Judgment (Sep. 14, 2015).

15. *Juliana*, 217 F.Supp.3d.

16. Wood & Woodward IV, *supra* note 1, at 644.

17. *Id.* at 652.

18. Wood & Galpern, *supra* note 7, at 272.

territory. If they fail to regulate (e.g., limit the issuance of permits for) the development of these resources and this failure results in harm to the public health, they may be held accountable under the Public Trust Doctrine.[19]

II. REINVIGORATING AN ANCIENT ROMAN LAW DOCTRINE

The Public Trust Doctrine traces its roots to ancient Roman Law,[20] in the Institutes of Justinian.[21] The doctrine states that "by the law of nature these things are common to mankind[:] the air, running water, the sea, and consequently the shores of the sea."[22] It flows from the understanding that certain resources are *res communes* (owned by everyone), and the State administers these resources for the benefit of all citizens.[23] The repose in the State of the authority to administer the *res* carries an obligation to maintain its integrity. At its core, the Public Trust Doctrine places a duty on the State to protect natural resources for the benefit of the public.[24] Scholars explain that

> [t]he trust is rooted in the original social compact that citizens make with their governments. Because *citizens would never confer to their government the power to substantially impair resources crucial to their survival and welfare, the governing assumption of the public trust principle is that citizens reserve public ownership of crucial resources as a perpetual trust to sustain themselves and future generations of citizens.*[25]

The trust thus secures the people's right to a sustained natural endowment.[26] In his seminal work on the Public Trust Doctrine, Professor

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19. *See* Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

20. Wood & Galpern, *supra* note 7, at 263 (citing Michael Blumm & Rachel 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, 741 (2012)).

21. Wood & Woodward IV, *supra* note 1, at 648.

22. Matthews v. Bay Head Improvement Association, 95 N.J. 306, 316-17 (1984) (U.S.) (citing THOMAS SANDARS, THE INSTITUTES OF JUSTINIAN 90 (8th ed. 1888)).

23. *See* Geer v. Connecticut, 161 U.S. 519, 525 (1896) (citing ROBERT-JOSEPH POTHIER, TRAITÉ DES OBLIGATIONS 21 (1821 ed.)).

24. Wood & Galpern, *supra* note 7, at 272.

25. *Id.* at 274 (emphasis supplied).

26. Wood & Woodward IV, *supra* note 1, at 648-49.

Joseph L. Sax (Professor Sax), the proponent of the modern Public Trust Doctrine,[27] suggested three criteria for the use of the doctrine:

(1) It must contain some concept of a legal right in the general public;

(2) [I]t must be enforceable against the government; and

(3) [I]t must be capable of an interpretation consistent with contemporary concerns for environmental quality.[28]

According to Professor Sax, the understanding of the Public Trust Doctrine that enjoys "the greatest historical support" states that "certain interests are so intrinsically important to every citizen that their free availability tends to mark the society as one of citizens rather than of serfs."[29] This approach presents a fairly robust doctrine that can be invoked as legal basis to hold a State liable to account for its failure to properly manage and regulate trust resources.[30]

The Public Trust Doctrine charges the State with a two-fold duty: the *duty to protect* the *res* against substantial impairment,[31] and the *duty to repair* any damage to the *res*.[32] These public trust obligations are separate and distinct from (and in fact, go beyond) the State's duty to enact laws and regulations that purport to manage the *res* but which, in the case of climate change, are often merely aspirational and extremely difficult to implement.[33] Moreover, these duties are active, not merely passive.[34] To fulfill these, it is not sufficient that laws and regulations are passed; they must *actually work* to protect and maintain the trust resources.

Early jurisprudence on the Public Trust Doctrine shows its potential to act as a powerful limit on State action.[35] For example, according to Professor

27. *See* Sax, *supra* note 19.

28. *Id.* at 474.

29. *Id.* at 484.

30. *Id.* at 485.

31. Wood & Woodward IV, *supra* note 1, at 666.

32. *Id.*

33. *Id.*

34. Wood & Galpern, *supra* note 7, at 282–83.

35. *See, e.g.*, Sax, *supra* note 19; Wood & Woodward IV, *supra* note 1; & Kassandra Castillo, *Climate Change & The Public Trust Doctrine: An Analysis of Atmospheric Trust Litigation*, 6 SAN DIEGO J. CLIMATE & ENERGY L. 221 (2015). Many of these cases have been thoroughly discussed and analyzed in the sources

Sax, the 1892 US case of *Illinois Central Railroad Company v. Illinois*[36] has "articulated a principle that has become the central substantive thought in public trust litigation."[37]

> When a [S]tate 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.[38]

In this case, the congress of Illinois had earlier granted extensive portions of submerged lands underlying Lake Michigan, in fee simple, to the Illinois Central Railroad Company.[39] The grant spanned more than 1,000 acres, virtually the whole commercial waterfront of Chicago. Later, the congress of Illinois wanted to rescind the grant and so brought suit in court for this purpose.[40] The US Supreme Court (SCOTUS) allowed the rescission, holding that the state legislature cannot "divest itself of authority to govern the whole of an area in which it has responsibility to exercise its police power; to grant almost the entire waterfront of a major city to a private company is, in effect, to abdicate legislative authority over navigation."[41] In its decision, the SCOTUS clarified the scope of public trust assets as "public property, or property of a special character [...] [which] cannot be placed entirely beyond the direction and control of the [S]tate."[42]

Four years later, in 1896, a Wisconsin court had the occasion nullify a law granting interest in natural resources to private persons, using the Public Trust Doctrine. The case, *Priewe v. Wisconsin State Land and Improvement Company*,[43] involved a legislative authorization given to a private corporation to drain a lake, supposedly to protect public health. The defense was raised

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mentioned. To avoid redundancies, this Article simply highlights some key aspects of these decisions.

36. Illinois Central R. Co. v. Illinois, 146 U.S. 387 (1892).

37. Sax, *supra* note 19, at 490.

38. *Id.*

39. *Illinois Central R. Co.*, 146 U.S., at 398.

40. *Id.* at 410-11.

41. Sax, *supra* note 19, at 489.

42. *Illinois Central R. Co.*, 146 U.S. at 454.

43. Priewe v. Wisconsin State Land & Improvement Co., 67 N.W. 918 (1896) (U.S).

that the legislature's determination of public purpose in disposing of interests over the lake should be conclusive on the judiciary.[44] The Supreme Court of Wisconsin disagreed and said that it had the authority and responsibility to review the legislature's "public purpose" to determine if it was in consonance with the state's public trust duty.[45] Upon review, the Supreme Court of Wisconsin found a complete absence of public benefit in the legislative authorization.[46] It held that draining the lake would only benefit private parties and not the general public.[47] In reaching its decision, the Supreme Court of Wisconsin considered that its ruling would be applicable to other cases brought under similar circumstances, and upholding the grant of authority to drain the lake would pave the way for similar authorizations to drain all 1,240 lakes in the state of Wisconsin.[48] It found that this scenario would be completely absurd and would be a breach of the State's duty as trustee of public lands.[49] Thus, the Supreme Court of Wisconsin held that the state was without authority to remove the lake from the public's reach by allowing a private company to drain it for the latter's use.[50]

In 1916, the Supreme Court of Ohio explained, "the [S]tate is merely the custodian of the legal title, charged with the specific duty of protecting the trust estate and regulating its use [...] [a]n individual may abandon his private property, but a public trustee cannot abandon public property."[51] Thus, although in limited instances the State can allow private persons to use property, that grant of license remains at all times imbued with public interest and the State retains the responsibility to ensure that the use of that property does not diminish the *res*.

In 1969, in a case involving the use of the San Francisco Bay,[52] the court ruled that the bay should be examined as a single asset, recognizing that

44. *Id.* at 919.

45. *Id.* at 919–20.

46. *Id.* at 920.

47. *Id.* at 922.

48. *Id.*

49. *Priewe*, 67 N.W. at 922.

50. *Id.*

51. State v. Cleveland & P.R. Co., 113 N.E. 677, 682 (1916) (U.S.).

52. SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION, SAN FRANCISCO BAY PLAN (1969 ed.).

activities in one area may affect other areas, so the entire bay must be regulated as one unit.[53]

Also, in the *Waiāhole Ditch*[54] decision, "the [ ] Supreme Court [of Hawai'i] rejected the State's argument that the trust protected navigable waters but did not extend to ground waters."[55] The Supreme Court of Hawai'i explained that these systems are interconnected and that a negative effect on one also adversely impacts the other.[56] Thus, the Supreme Court of Hawai'i held that the public trust extends to ground waters.[57]

Courts in other regions, like Asia, have also found the Public Trust Doctrine to inhere in the relationship between sovereign States and their citizens.

In *M.C. Mehta v. Kamal Nath and Others*,[58] for example, the Supreme Court of India held that the Public Trust Doctrine extends to natural

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53. *Id.* This is also recognized in the California Government Code which reads,

> The Legislature hereby finds and declares that the public interest in the San Francisco Bay is in its beneficial use for a variety of purposes; that the public has an interest in the bay as the most valuable single natural resource of an entire region, a resource that gives special character to the bay area; that the bay is a single body of water that can be used for many purposes, from conservation to planned development; and that the bay operates as a delicate physical mechanism in which changes that affect one part of the bay may also affect all other parts. It is therefore declared to be in the public interest to create a politically-responsible, democratic process by which the San Francisco Bay and its shoreline can be analyzed, planned, and regulated as a unit.

CAL. GOVT. CODE §§ 66600-01 (West 1966).

54. *In Re: Water Use Permit Applications, Petitions For Interim Instream Flow Standard Amendments, And Petitions For Water Reservations For The Waiāhole Ditch Combined Contested Case Hearing*, 9 P.3d 409 (2004) (U.S.).

55. Wood & Woodward IV, *supra* note 1, at 674 (citing *In Re: Water Use Permit Applications, Petitions For Interim Instream Flow Standard Amendments, And Petitions For Water Reservations For The Waiāhole Ditch Combined Contested Case Hearing*, 9 P.3d at 409).

56. *Id.*

57. *Id.*

58. M.C. Mehta v. Kamal Nath and Others, W.P.(C) No.-003727-003727, Dec. 13, 1996, *available at* http://supremecourtofindia.nic.in/jonew/judis/14611.pdf (last accessed Jan. 26, 2018) (India).

resources such as rivers, forests, seashores, and air for the purpose of protecting the ecosystem. Here, the Supreme Court of India said the Indian government patently breached the public trust when it leased riparian forestland in favor of a motel for commercial purposes.[59] Worse, the motel subsequently blocked the river's natural channel and reclaimed large tracts of land to divert the river's flow to protect the motel from future floods.[60] Further, the motel was discovered to be linked to the family of the Minister of Environment and Forests.[61] Thus, the Indian Supreme Court invalidated the lease awarded by its government.[62]

In reaching its ruling, the Supreme Court of India explained that as early as the ancient Roman Empire, laws had recognized that certain resources like air, water, and forests are so important that they are held by government in trusteeship for the free and unimpeded use of the general public.[63] These need to be freely available to everyone, irrespective of their station in life; it would be wholly unjustified to take them out of public ownership.[64] These resources are either *res nullius* (owned by no one) or *res communes*. In English common law, the Crown could own these resources, with the limitation that it could not grant these properties to private owners if the effect would be to interfere with public interests in navigation or fishing.[65] Significantly, the Supreme Court of India ruled that there is no reason why the Public Trust Doctrine should not be expanded to include all ecosystems operating in our natural resources.[66]

In Pakistan, the case of *General Secretary, West Pakistan Salt Miners Labour Union (CBA) Khewral, Jhelum v. The Director, Industries and Mineral Development, Punjab, Lahore*[67] involved the grant of various mining permits in

59. *Id.* at 26.

60. *Id.* at 1-3.

61. *Id.* at 1.

62. *Id.* at 21.

63. *Id.* at 19.

64. *M.C. Mehta*, W.P.(C) No.-003727-003727, at 20.

65. *Id.* at 19.

66. *Id.* at 25.

67. General Secretary, West Pakistan Salt Miners Labour Union (CBA) Khewral, Jhelum v. The Director, Industries and Mineral Development, Punjab, Lahore, 1994 SCMR 2061 (1994) (Pak.) A copy of this case is *available at* http://www.globalhealthrights.org/wp-content/uploads/2013/02/SC-1994-Salt-Miners-v.-Director-Industries-and-Mineral-Development.pdf (last accessed

areas near Mitha Pattan, a spring which was the only major source of drinking water in the area. Despite prohibitions, the authorities had granted mining leases in the catchment area. The petitioners, residents and mine workers in the area, claimed that as a result of mining activities, poisonous wastewater from the mines was polluting the reservoir and causing a health hazard in violation of their right to clean and unpolluted water.[68] Over the objection of the defense, the Supreme Court of Pakistan allowed the petition, ruling that water was necessary for human existence and that if it were polluted, it could seriously threaten human life.[69] Thus, it held that persons exposed to polluted water could claim violations of their fundamental right to life, which the Constitution safeguarded.[70] The Supreme Court of Pakistan then ordered that the mine operations be moved to a safe distance from the stream and small reservoir, and appointed a commission to ensure that its order was implemented.[71] The Supreme Court of Pakistan also ordered the mines operating adjacent to the catchment area to take necessary measures to prevent pollution of the stream, reservoir, and catchment area; and enjoined the authorities from granting new licenses in the catchment area, or renewing old ones without court approval.[72]

In Pakistan's case, courts were willing to step into the sphere of the executive, even creating a commission that would monitor and ensure implementation of its order, to protect the constitutional right to life from the threat of water pollution.[73] This is an example of a court of law finding a public trust duty to maintain the *res* (i.e., ensure that access to water was not impaired by pollution) and nullify executive authorizations that harmed it.

In the Philippines, the Court recognized the Public Trust Doctrine in the landmark case of *Oposa v. Factoran, Jr.*,[74] where it decided to nullify the

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Jan. 26, 2018). Subsequent page numbers referred to in the footnotes of this Article pertain to the page numbers of the online copy.

68. *Id.* at 1.

69. *Id.* at 5.

70. *Id.* at 7.

71. *Id.* at 9.

72. *Id.* at 10.

73. *See* Ahmad Rafay Alam, Pakistan court orders government to enforce climate law, *available at* https://www.thethirdpole.net/2015/09/24/pakistan-court-orders-government-to-enforce-climate-law (last accessed Jan. 26, 2018).

74. Oposa v. Factoran, Jr., 224 SCRA 792 (1993).

timber license agreements that authorized "the logging of the country's last remaining ancient forest."[75] The Court stated,

> [E]very generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced and healthful ecology [...] [This] belongs to a different category of rights [than civil and political rights] altogether for it concerns nothing less than self-preservation and self-perpetuation [...] the advancement of which may even be said to predate all governments and constitutions.
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> [...]
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> [T]hese basic rights need not even be written in the Constitution for they are assumed to exist from the inception of humankind. If they are now explicitly mentioned[,] [...] it is because of the well-founded fear of its framers that unless [these rights] [...] are mandated as [S]tate policies by the Constitution itself [...] the day would not be too far when all else would be lost not only for the present generation, but also for those to come — generations which stand to inherit nothing but parched earth incapable of sustaining life.[76]

In the more recent 2008 case of *Metro Manila Development Authority v. Concerned Residents of Manila Bay*,[77] the Court impliedly recognized the same doctrine. The Court ruled that continuing *mandamus* is available to compel government to do its job —

> Even assuming the absence of a categorical legal provision specifically prodding petitioners to clean up the bay, [the State] cannot escape [its] obligation to future generations of Filipinos to keep the waters of the Manila Bay [as] clean and clear as humanly as possible. Anything less would be a *betrayal of the trust reposed in them*.[78]

Ultimately, the Public Trust Doctrine places a solemn responsibility on the State to protect the diffuse public interests from "tightly organized groups with clear and immediate goals."[79] In many instances, "a diffuse majority (the general public) is made subject to the will of a concerted minority (usually large private corporations or powerful private persons, with

75. Wood & Woodward IV, *supra* note 1, at 653.

76. *Oposa*, 224 SCRA at 803 & 805.

77. Metro Manila Development Authority v. Concerned Residents of Manila Bay, 574 SCRA 661 (2008).

78. *Id.* at 692 (emphasis supplied).

79. Sax, *supra* note 19, at 556.

profit as their immediate goal),"[80] simply because, wittingly or unwittingly, there is no real representative who vouches for the interests of that majority. Also, regulated corporations raise the defense that their activities are legal, as evinced by permits granted to them for their undertakings. Furthermore, in many occasions, rapidly advancing technologies make governing authorities subject to regulatory capture. In these instances, the courts can intervene to safeguard the majority's rights.

The cases above are but a few examples where courts across the world have accepted the Public Trust Doctrine and reviewed the acts of co-equal branches of government. There are other trust resources where the courts have similarly applied the doctrine. These include stepping in to protect, among others, biodiversity, wildlife habitat, aesthetics, recreation, groundwater, wetlands, dry sand beaches, parks, non-navigable waterways, and most recently, the air and atmosphere.[81]

III. USING ANCIENT LAW TO ADDRESS A MODERN GLOBAL CHALLENGE: CLIMATE CHANGE

Each generation's right to a healthy environment and its natural resources comes with a correlative obligation to maintain these for use by future generations. This is the generally accepted principle of sustainable development. In the case of climate change, the right of present generations to burn fossil fuels must be tempered with the right of future generations to have a habitable world; in other words, a world they can survive in. Viewed against the right to have basic access to energy and the right to economic development, the balance may be tipped in favor of the present generations. However, justifying current emissions may become problematic when the increased use of fossil fuels is for luxury, as opposed to subsistence. For example, in 2009, the average *per capita* emission of an affluent country like Gibraltar[82] was 2,533 times that of a least developed country like Uganda.[83]

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80. *Id.* at 560.

81. *See* Wood & Woodward IV, *supra* note 1, at 654 & Sax, *supra* note 19. *See, e.g.*, Kanuk v. State, 335 P.3d 1088, 1101-02 (2014) (U.S.). In this case, the Supreme Court of Alaska held that the atmosphere is a public trust asset that the government must protect as trustee for the people. *Id.*

82. The emissions are measured at 152 tons CO_2 per person (tCO_2/person). *See* The Guardian, *World carbon dioxide emissions data by country: China speeds ahead of the rest*, GUARDIAN, Jan. 31, 2011, *available at* https://www.theguardian.com/news/datablog/2011/jan/31/world-carbon-dioxide-emissions-country-data-co2 (last accessed Jan. 26, 2018).

Per capita emissions of Qataris[84] were almost 2,000 times larger than those of the citizens of the Democratic Republic of Congo.[85]

This becomes an ethical issue when unencumbered emissions affect the right of people on the other side of the globe to access their ancestors' lands.[86] For example, it is widely accepted that climate change will result in a rise in sea levels. This rise could submerge several low-lying nations in the Pacific (small island developing states), thus preventing future generations of Pacific Island nationals from using and accessing natural resources in their ancestors' territories.[87] The same goes with the Arctic region where large swathes of glaciers melt due to anthropogenic activities.[88]

A crucial question for climate scientists, economists, and policymakers to decide together is how far to go in discounting future values. So far, it appears that the ecosystem services for future generations have been discounted to nothing. This is particularly true with the regulating service of climate control. Viewed through this lens, it becomes easy to justify that, beyond the traditional subjects of the public trust, e.g., watercourses and fisheries, a stable climate system indispensable for human survival should be deemed a part of the public trust, over which the State's responsibility cannot be abdicated.

A. Climate Change: A Modern Global Challenge

Some scientists and historians have called the period since the Industrial Revolution as the "Age of the Anthropocene" because of humankind's large-scale impacts on natural ecosystems.[89] In just a few generations,

83. The emissions are measured at 0.06 tCO_2/person. *Id.* For reference, Philippine per capita emissions are at 0.74 tCO_2/person. *Id.*

84. The emissions are measured at 79.82 tCO_2/person. *Id.*

85. The emissions are measured at 0.04 tCO_2/person. *Id.*

86. Edith Brown Weiss, *Implementing Intergenerational Equity*, *in* RESEARCH HANDBOOK ON INTERNATIONAL ENVIRONMENTAL LAW 102 (Malgosia Fitzmaurice, et al. eds., 2011).

87. John Vidal, *Pacific Islands Fighting for Survival as Sea Levels Rise*, JAP. TIMES, Sep. 6, 2013, *available at* https://www.japantimes.co.jp/life/2013/09/06/environment/pacific-islands-fighting-for-survival-as-sea-levels-rise (last accessed Jan. 26, 2018).

88. Weiss, *supra* note 86, at 113.

89. Will Steffen, et al., *The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?*, 36 AMBIO 614, 614 (2007).

humans have extracted gigatons of fossil fuels that took over several hundred million years to form.[90] Humankind's burning of these fossil fuels led to a rapid release of GHGs into the atmosphere, altered the earth's climate system drastically, and later began affecting humans themselves. As discussed above, in the 1960s, governments began to recognize that human interference with the climate system would have immense global impacts. Thus, in 1988, the UNEP and the WMO formed the IPCC to regularly monitor and assess the latest knowledge about climate change and its impacts.[91] Two years later, the IPCC published its First Assessment Report, which then formed the basis for the United Nations Framework Convention on Climate Change.[92]

The United Nations Framework Convention on Climate Change provides the framework for international cooperation on climate change. It has the goal of stabilizing atmospheric GHG concentrations "at a level that would prevent dangerous anthropogenic interference with the climate system."[93] The United Nations Framework Convention on Climate Change enjoys near-universal membership with 197 Parties. [94] The Paris Agreement,[95] which 196 parties adopted at the conclusion of the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP) in December 2015, provided for specifics. It set categorical, ambitious, long-term goals of keeping the global average temperature increase to well below 2°C above pre-industrial levels and pursuing efforts to limit this increase to 1.5°C.[96] As of 2 December 2017, 170

90. *Id.* at 616.

91. Intergovernmental Panel on Climate Change, *supra* note 3.

92. United Nations Framework Convention on Climate Change, The Second World Climate Conference, *available at* http://unfccc.int/resource/ccsites/senegal/fact/fs221.htm (last accessed Jan. 26, 2018).

93. United Nations Framework Convention on Climate Change art. 2, *entered into force* Mar. 21, 1994, 1771 U.N.T.S. 107 [hereinafter United Nations Framework Convention on Climate Change].

94. These include all 193 UN Member States, plus the European Union, Niue, the Cook Islands, and the State of Palestine. *See* United Nations Framework Convention on Climate Change, Status of Ratification of the Convention, *available at* http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (last accessed Jan. 26, 2018).

95. Paris Agreement under the United Nations Framework Convention on Climate Change, *opened for signature* Apr. 22, 2016.

96. *Id.* art. 2.

of the 197 United Nations Framework Convention on Climate Change Parties had ratified the Paris Agreement.[97] The latest to join the Paris Agreement was Syria, which acceded to the treaty on 13 November 2017.[98] The accession of Syria, a country that has been mired in a civil war since 2011, isolates the US, which under the presidency of Donald J. Trump, earlier announced its intention to withdraw from the Paris Agreement.[99]

The international scientific community has acknowledged that CO_2 levels must not exceed 350 parts per million (PPM) in order to keep the earth habitable.[100] The Paris Agreement requires each country to submit its Intended Nationally Determined Contribution (INDC) to reach this goal.[101]

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97. *See* United Nations Framework Convention on Climate Change, Status of Ratification of the Paris Agreement, *available at* http://unfccc.int/paris_agreement/items/9444.php (last accessed Jan. 26, 2018).

98. *Id.*

99. Lisa Friedman, *Syria Joins Paris Climate Accord, Leaving Only U.S. Opposed*, N.Y. TIMES, Nov. 7, 2017, *available at* https://www.nytimes.com/2017/11/07/climate/syria-joins-paris-agreement.html (last accessed Jan. 26, 2018). *See also* Elaina Zachos, Syria to Join Paris Climate Pact, Leaving U.S. Isolated, *available at* https://news.nationalgeographic.com/2017/11/syria-to-join-paris-climate-agreement-leaves-united-states-isolated-spd (last accessed Jan. 26, 2018). It reports that States and private corporations in the US have nevertheless declared their continuing support of the Paris Agreement. *See also* Brian Palmer, Is America Actually Out of the Paris Agreement? (Article published by the National Resources Defense Council), *available at* https://www.nrdc.org/stories/america-actually-out-paris-agreement (last accessed Jan. 26, 2018).

100. Wood & Galpern, *supra* note 7, at 262.

101. Lavanya Rajamani, *Differentiation and Equity in the Post-Paris Negotiations*, *in* THE PARIS AGREEMENT AND BEYOND: INTERNATIONAL CLIMATE CHANGE POLICY POST-2020 19 (Robert N. Stavins & Robert C. Stowe eds., 2016). The Intended Nationally Determined Contributions (INDC) mechanism represents a shift away from the previous top-down approach under the Kyoto Protocol, where emission reduction targets were imposed on developed countries, towards a bottom-up approach, where each developed and developing party evaluates its own national circumstances and determines the nature and extent of mitigation and adaptation actions it is willing and able to commit. In other words, through this self-differentiation approach, each country voluntarily offers its own program of action (the INDC) based on its strategic and long-term interests. *Id.*

The UNEP monitors emissions reduction or mitigation commitments and regularly publishes an emissions gap report. The UNEP focuses on the "gap" between the reductions needed to achieve the globally agreed temperature targets at lowest cost and the reductions that are likely achievable from full implementation of the Nationally Determined Contributions (NDCs) under the Paris Agreement.[102] Its 2017 report, its eighth report, showed that "[e]ven if the current NDCs are fully implemented, the carbon budget for limiting global warming to below 2°C will be about 80 percent depleted by 2030. Given the current [ ] carbon budget estimates, the available global carbon budget for 1.5°C will already be well depleted by 2030."[103] According to the probabilistic assessment of Climate Action Tracker, a group that monitors and evaluates country commitments vis-à-vis their contribution to global emissions, the current policies and pledges based on NDCs received as of 1 November 2017 gives a 50% chance of a global average temperature increase of 3.16°C or higher versus preindustrial levels by 2100.[104]

Climate Action Tracker reports that a large gap remains between what governments have obligated themselves to do and the total projected impacts of actions they have *actually undertaken*.[105] Both the current policy and pledge trajectories are still well above emissions pathways consistent with the Paris Agreement's long-term temperature goal of 1.5°C.[106]

Clearly there is still a long way to go to achieve Paris Agreement goals. In fact, one of the largest historical emitters, the US, increased its emissions by around 5% between 1990 and 2014.[107] In the meantime, in 2015, global average surface temperatures reached 1°C above the 1850-1900 average.[108] This is rendered more alarming by the fact that GHGs emitted into the

102. U.N. ENVIRONMENT PROGRAMME, THE EMISSIONS GAP REPORT 2017 xiv (2017).

103. *Id.*

104. Climate Action Tracker, Effect of Current Pledges and Policies on Global Temperature, *available at* http://climateactiontracker.org/global.html (last accessed Jan. 26, 2018).

105. *Id.*

106. *Id.*

107. Castillo, *supra* note 35, at 222.

108. WORLD METEOROLOGICAL ORGANIZATION, WMO STATEMENT ON THE STATUS OF THE GLOBAL CLIMATE IN 2015 5 (2016).

atmosphere remain there for up to thousands of years.[109] So even if all countries were to completely stop all emissions today, it would still require many human lifetimes for GHG levels to go down.[110]

B. Lawyers Responding: The Oslo Principles

To support the call for urgency in climate action, a group of lawyers came together in 2015 and agreed on a set of principles called the Oslo Principles on Global Climate Change Obligations (Oslo Principles).[111] These principles affirm that climate change threatens inalienable human rights such as the right to life, health, water, food, a clean environment, and other social, economic, and cultural rights, as well as the rights of children, women, minorities, and indigenous peoples.[112] They recognize that the grave and universal nature of climate change's threat to the earth's ecological balance requires all States and individuals to act with urgency and respect for justice and equity in decisions affecting the climate.[113] The Oslo Principles thus invoke the precautionary principle, one that admonishes policymakers to err on the side of caution.

> (1) *Precautionary principle:* There is clear and convincing evidence that the [GHG] emissions produced by human activity are causing significant changes to the climate and that *these changes pose grave risks of irreversible harm to humanity, including present and future generations*, to the environment, including other living species and the entire natural habitat, and to the global economy.
>
> (a) The Precautionary Principle requires that:
>
> (1) GHG emissions be reduced to the extent, and at a pace, necessary to protect against the threats of climate change that can still be avoided; and
>
> (2) the level of reductions of GHG emissions required to achieve this, should be based on any credible and realistic

109. Mason Inman, *Carbon is Forever*, 2 NATURE REP. CLIMATE CHANGE 156, 157 (2008).

110. *Id.*

111. Oslo Principles on Global Climate Change Obligations (Principles Prepared by an Expert Group on Global Climate Obligations), *available at* https://law.yale.edu/system/files/area/center/schell/oslo_principles.pdf (last accessed Jan. 26, 2018).

112. *Id.*

113. *Id.*

worst-case scenario accepted by a substantial number of eminent climate change experts.

(b) The measures required by the Precautionary Principle should be adopted without regard to the cost, unless that cost is completely disproportionate to the reduction in emissions that will be brought about by expending it.[114]

These Oslo Principles could bolster the legal basis for bringing climate change action to courts.

C. A New Breed of Cases: Atmospheric Trust Litigation

In 2016, drawing on ancient Roman Law, Professor Mary Christina Wood (Professor Wood) published an article on the Public Trust Doctrine, encouraging environmental groups and individuals to use it to hold their governments accountable for sufficient and timely climate action.[115]

Around the world, citizens and civil society groups responded and began filing lawsuits against their governments, seeking to hold them accountable for a failure to protect the atmosphere. These suits have been targeted strategically against States as defendants, rather than private corporations, because States have recognized the climate crisis in official documents such as IPCC reports and have made express commitments to address it in international negotiations.[116]

The case of *Robinson Township v. Commonwealth of Pennsylvania*[117] involved the Marcellus Shale Formation in Pennsylvania, which is the largest natural gas reservoir in the US. To access and consolidate the gas and make its recovery efficient, unconventional drilling methods, including hydraulic fracturing or fracking, are required. Fracking involves injecting fluids into the ground at high pressure to fracture shale rock and thereby release natural gas.[118] To promote this, the Pennsylvania Oil and Gas Act was amended through Act 13, which required municipalities to allow drilling in all zoning districts and preempted municipal drilling bans. Suits were filed to question

114. *Id* at 3.

115. Wood & Woodward IV, *supra* note 1, at 682.

116. Cox, *supra* note 8, at 3.

117. Robinson Township v. Commonwealth of Pennsylvania, 83 A.3d 901 (2013) (U.S.).

118. *See* BBC News, What is fracking and why is it controversial?, *available at* http://www.bbc.com/news/uk-14432401 (last accessed Jan. 26, 2018).

the amendment, with citizens claiming violations of their constitutional right to clean air.[119] The Supreme Court of Pennsylvania, in a plurality opinion penned by Chief Justice Ronald D. Castille, held that the Pennsylvania Oil and Gas Act was inconsistent with the Commonwealth's duty as trustee. The Act also ordered that municipalities disregard their obligations to conserve and maintain public natural resources, and directed that they affirmatively remove local environmental safeguards. It also violated the citizens' constitutional right to a clean environment.[120]

According to Jordan B. Yeager, an environmental lawyer, an important implication of this decision is that any unreasonable environmental degradation resulting from permitting or legislation could now be challenged in court on constitutional grounds.[121]

In *Urgenda Foundation v. The State of the Netherlands (Ministry of Infrastructure and the Environment)*,[122] the Urgenda Foundation and 886 other plaintiffs sued the Dutch government, claiming that the State failed to commit a just share in limiting carbon emissions. Anchoring its claim on the tort of negligence (failure of its duty of care), Urgenda argued that the State should be held liable for not doing enough to regulate GHG emissions within the Netherlands.[123]

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119. PA. CONST. art. I, § 27. This provision provides —

> 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 generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

Id.

120. *Robinson Township*, 83. A.3d at 987-88.

121. Susan Phillips, Pa. Supreme Court upholds broad interpretation of Environmental Rights Amendment, *available at* https://stateimpact.npr.org/pennsylvania/2017/06/20/pa-supreme-court-upholds-broad-interpretation-of-environmental-rights-amendment (last accessed Jan. 26, 2018).

122. Urgenda Foundation v. The State of the Netherlands (Ministry of Infrastructure and the Environment), C/09/456689/HA ZA 13-1396, June 24, 2015, *available at* https://cer.org.za/wp-content/uploads/2015/10/Urgenda-v-State-of-the-Netherlands.pdf (last accessed Jan. 26, 2018) (Neth.)

123. Cox, *supra* note 8, at 4.

While the *Urgenda* case used tort law as basis to hold the State liable, the Urgenda Foundation purposely made the State the defendant instead of fossil fuel companies, based on the State's commitments under the United Nations Framework Convention on Climate Change and the Paris Agreement, and its repeated acknowledgement during international negotiations of the dangers of climate change and the urgent action needed to abate it.[124] These countries, especially the developed ones, even jointly adopted the IPCC reports and used these as starting points for international climate negotiations.

On 24 June 2015, the Hague District Court ruled in favor of Urgenda and ordered the State to revise its climate mitigation targets to ensure that Dutch emissions by 2020 will be at least 25% lower than those in 1990, finding the government's target of 17% to be insufficient.[125] According to the Hague District Court, the fact that Dutch emissions were minor compared to the total global emissions does not alter the State's obligation to exercise care towards third parties and, like other Annex I countries, the Netherlands must take the lead in implementing mitigation measures and commit to a more than proportionate contribution to emissions reductions.[126] The Hague District Court also noted that Dutch *per capita* emissions are one of the highest in the world.[127] The essence of the no-harm rule, deriving from the Trail Smelter Arbitration of 1941, is that no State has the right to use its territory, or have it used, to cause significant damage to other States.[128]

In *Foster v. Washington Department of Ecology*,[129] a court of law declared for the first time the links between ocean acidification and climate change.

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124. *Id.* at 5.

125. *Urgenda Foundation*, C/09/456689/HA ZA 13-1396 at ¶ 2.61. *See also* Urgenda Foundation, Climate Case Explained, *available at* http://www.urgenda.nl/en/climate-case/legal-documents.php (last accessed Jan. 26, 2018).

126. *Urgenda Foundation*, C/09/456689/HA ZA 13-1396 at ¶ 4.79.

127. *Id.*

128. Cox, *supra* note 8, at 4.

129. *Foster v. State Dep't of Ecology*, No. 14-2-25295-1 SEA (2015) (Wash). A scanned copy of this case is *available at* https://static1.squarespace.com/static/571d109b04426270152febe0/t/57607fe459827eb8741a852c/1465941993492/15.11.19.Order_FosterV.Ecology.pdf (last

Examining science-based arguments, the Supreme Court of Washington ruled that ocean acidification is a result of climate change. It applied the Public Trust Doctrine to the atmosphere by recognizing the ecological chain of causation. It unequivocally declared that the State has a public trust duty to protect the atmosphere and the climate system.[130]

Further, in what promises to be a landmark federal lawsuit, *Juliana v. U.S.*,[131] 21 youth plaintiffs aged 10-21 years old sued the US government for the protection of their right to maintain a healthy atmosphere for present and future generations. The government filed a motion to dismiss the suit, and Judge Anne L. Aiken (Judge Aiken) denied the motion upon a determination that the US Constitution provides a fundamental right to a stable climate system.[132] Judge Aiken explained that "the right to a climate system capable of sustaining human life is fundamental to a free and ordered society [...] a stable climate system is quite literally the foundation 'of society, without which there would be neither civilization nor progress.'"[133] In her ruling, she cited *Oposa* in finding that the Public Trust Doctrine is an inherent aspect of sovereignty,[134] and that "the right of future generations to a 'balanced and healthful ecology'[135] is so basic that it 'need not even be written in the Constitution for [it is] assumed to exist from the inception of humankind.'"[136] Trial has been set for 2018. Since rulings in atmospheric trust litigation have a huge potential to be replicated in different countries because of the reach of the ancient Roman doctrine,[137] the decision in this

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accessed Jan. 26, 2018). Subsequent page numbers referred to in the footnotes of this Article pertain to the page numbers of the scanned online copy.

130. *Id.* at 7.

131. *Juliana*, 217 F. Supp.3d.

132. *Id.* at 1250.

133. *Id.*

134. *Id.*

135. This phrase is lifted from a provision in the Philippine Constitution which reads, "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature."

PHIL. CONST. art. II, § 16.

136. *Juliana*, 217 F. Supp.3d at 1261.

137. *See generally* Blumm & Guthrie, *supra* note 20.

case will surely have a huge impact on the future of climate litigation across the globe.[138]

Clearly, courts can play a critical role in maintaining a balance of power — protecting citizens from unreasonable State action. Professor Wood, with her co-author Charles W. Woodward IV, makes a crucial point that the role of the judiciary in atmospheric trust litigation is similar to that of bankruptcy courts overseeing the liquidation of assets of a "terribly managed company."[139]

IV. CHALLENGES TO THE DOCTRINE'S APPLICABILITY

A. Obfuscation of Facts

For decades, fossil fuel companies have been obfuscating facts, creating doubts where the science said there were none, or making uncertainties seem much larger or more serious than they actually were.[140] Historians Naomi Oreskes and Erik Conway have explained these thoroughly in their book, *Merchants of Doubt*, and the scientific challenges no longer need to be discussed further here.

B. Traditional Application

Arguments have been made that the Public Trust Doctrine is limited to watercourses for fisheries, commerce, and navigation,[141] and that it does not extend to other resources like the atmosphere. However, the cases described in Part III show that in jurisdictions around the world, courts of law have been willing to apply the Public Trust Doctrine beyond the original subjects of navigable waters and fisheries. This is perhaps due to the principle underlying the doctrine.

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138. *See* Our Children's Trust, Global Legal Actions, *available at* https://www.ourchildrenstrust.org/global-legal-actions (last accessed Jan. 26, 2018). It contains details about other atmospheric trust litigation across the globe.

139. Wood & Woodward IV, *supra* note 1, at 668.

140. *See generally* ORESKES & CONWAY, *supra* note 6, at 178.

141. *See, e.g.*, Edgar Washburn & Alejandra Núñez, *Is the Public Trust a Viable Mechanism to Regulate Climate Change?* NAT. RESOURCS & ENVI., Volume 27, Issue No. 2.

For example, in what is popularly known as the *Mono Lake* case,[142] the Supreme Court of California held that the "purity of the air" is protected by the public trust.[143] The Supreme Court of California explained that the traditional triad of uses of the lake, i.e., navigation, commerce, and fishing, did not limit the public trust in the *res*. It ruled that the State's duty extended to the preservation of the *res* in its natural state so that it may continue to serve as an environment capable of providing food and habitat for birds and marine life.[144] The Supreme Court of California even said that scenic views and recreational purposes are covered by the State's trust obligation, and that the maintenance of the purity of the air is among the purposes of the public trust. Clearly, following this line of analysis leads to an argument that the maintenance of a climate system capable of sustaining human life is a part of the State's public trust obligation.

Further, as the Supreme Court of New Jersey stated, "we perceive the [P]ublic [T]rust [D]octrine not to be 'fixed or static,' but one to 'be molded and extended to meet changing conditions and needs of the public it was created to benefit.'"[145]

C. Futility of Single State Action

An opposition to the public trust obligation may also be raised that, because of the enormity of the climate problem, the regulations of a single State may have little discernible effects. However, the point of the Public Trust Doctrine is precisely that it takes a macro focus — each State acts as sovereign co-trustee of one atmospheric resource, and so each State is responsible for limiting the aggregate loading of CO_2 into the atmosphere.[146] In *Urgenda*, the Hague District Court made this precise observation. Over the defense that the Netherlands' contribution to global emissions was minor, the Hague District Court said the country's small contribution to global numbers was irrelevant to its duty of care.[147]

142. National Audubon Society v. Superior Court of Alpine County, 658 P.2d 709 (1983) (U.S.).

143. *Id.* at 719.

144. *Id.*

145. Wood & Galpern, *supra* note 7, at 285 (citing Matthews v. Bay Head Improvement Association, 471 A.2d 355, 365 (1984) (U.S.)).

146. Wood & Galpern, *supra* note 7, at 302.

147. *Urgenda Foundation*, C/09/456689/HA ZA 13-1396 at ¶ 4.50 (d).

Also, examining cumulative CO_2 emissions from 1850 to 2011, there are only seven countries that are responsible for approximately 80% of total global emissions.[148] That means that around 189 countries each contributed less than 1% of global emissions. Clearly, collective inaction by these countries on the ground of their minor contributions to global numbers would be catastrophic. Conversely, the aggregate impact of abatement measures in each of these 189 countries would be enormous. On top of that, individual action by each of the seven top emitters could produce tremendous emissions reductions.

D. Judicial Overreach

Perhaps one of the more commonly raised hurdles for courts that review the sufficiency of legislative and executive decisions is the potential for judicial overreach, as mentioned in *Victoria Segovia, et al. v. The Climate Change Commission (CCC).*[149] However, the power of judicial review is inherent in the courts, and is no different from the jurisdiction enumerated in Article VIII of the 1987 Philippine Constitution.[150] The courts' task then is

> to identify and correct those situations in which it is most likely that there has been an inequality of access to, and influence with, decision makers so that there is a grave danger that the democratic processes are not working effectively. To safeguard against such danger, the court has warned the other branches of government that they must be prepared to justify their position.[151]

While the courts have a "presumption that the [S]tate does not ordinarily intend to divert trust properties in such a manner as to lessen public uses,"[152] when evidence of such diversion is compelling, the courts cannot abdicate their responsibility to step in and hold the government accountable for the protection of trust resources.

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148. Mengpin Ge et. al., 6 Graphs Explain the World's Top 10 Emitters, *available at* https://wri.org/blog/2014/11/6-graphs-explain-world%E2%80%99s-top-10-emitters (last accessed Jan. 26, 2018).

149. Victoria Segovia, et al. v. The Climate Change Commission (CCC), G.R. No. 211010, Mar. 7, 2017, *available at* http://sc.judiciary.gov.ph/pdf/web/viewer.html?file=/jurisprudence/2017/march2017/211010.pdf (last accessed Jan. 26, 2018).

150. PHIL. CONST. art. VIII.

151. Sax, *supra* note 19, at 514.

152. *Id.* at 494.

V. CLIMATE CHANGE AND THE PHILIPPINE GOVERNMENT

The Philippines has been an active participant in international climate negotiations, year after year, calling for greater and more rapid global action to abate climate change. It was the chair of the Climate Vulnerable Forum from 2015-2016, and in the lead-up to the Paris climate conference in 2015, launched a call for the international community to accept the more ambitious 1.5°C long-term temperature target.[153]

In October 2015, the Philippines submitted its INDC, where it described how the country plans to reduce emissions based on its strategic and long-term interests.[154] In its INDC, the Philippines recognized its responsibility to contribute its fair share to global climate action and voluntarily committed to reduce its emissions by 70% by 2030, vis-à-vis its 2000-2030 business-as-usual (BAU) scenario,[155] despite accounting only for 0.35% of global emissions in 2016.[156] The BAU scenario represents the Philippine emissions trajectory if its government does not enact and implement new policies and measures to abate the country's emissions, assuming annual growth averages of 6.5% in gross domestic product and 1.85% in population.[157] Through consultations

153. Climate Vulnerable Forum, About the Climate Vulnerable Forum, *available at* http://www.thecvf.org/web/climate-vulnerable-forum (last accessed Jan. 26, 2018).

154. Republic of the Philippines, Intended Nationally Determined Contributions (Communication Submitted to United Nations Framework Convention on Climate Change last October 2015), *available at* http://www4.unfccc.int/submissions/INDC/Published%20Documents/Philippines/1/Philippines%20-%20Final%20INDC%20submission.pdf (last accessed Jan. 26, 2018).

155. *Id.* at 3.

156. Johannes Friedrich, et al., Infographic: What do your country's emissions look like? (Infographic on Data on Global Emissions per Country), *available at* http://www.wri.org/blog/2015/06/infographic-what-do-your-countrys-emissions-look (last accessed Jan. 26, 2018).

According to the Global Carbon Atlas, in 2016, the Philippines ranked #36 in terms of total emissions (up from #41 in 2014) and #153 in terms of *per capita* emissions (same as in 2014). *See* Global Carbon Atlas, Emissions (data visualization tool), *available at* http://www.globalcarbonatlas.org/?q=en/emissions (last accessed Jan. 26, 2018).

157. Republic of the Philippines, *supra* note 154, at 4.

with key stakeholders prior to the INDC formulation, the government identified five main sectors that should contribute to the emissions reduction goal: "energy, transport, waste, forestry, and industry."[158]

Yet, despite its INDC, the Philippine government continued to process applications for the construction of more fossil fuel plants, especially in Mindanao, a region slated to develop economically in the coming years. This, along with serious doubts about the feasibility of the Philippine INDC lead one to question how serious Philippine lawmakers are in managing climate change as the central issue of Filipino communities.

VI. THE PUBLIC TRUST DOCTRINE AND THE PHILIPPINES

Judicial activism is not foreign to the Philippines. In fact, it was a factor that spurred former Chief Justice Reynato S. Puno to issue the Rules of Procedure for Environmental Cases,[159] which provided a remedy called the Writ of *Kalikasan* to allow easier public access to courts for violations of environmental laws and regulations.[160]

Litigants have always challenged courts to step in where the executive and legislative branches of government have failed. In the case of natural resource protection, notable cases have been filed within the last few years seeking judicial action in the fight against climate change. Two of these cases are discussed below. Although neither case invokes the Public Trust Doctrine, the doctrine may nonetheless be instructive for the court and the Commission on Human Rights (CHR), if they take up the challenge of judicial activism to check executive and legislative delay that could endanger the lives of the sovereign people.

A. Rule-Making Petition Filed with the Supreme Court

On 30 June 2017, the Environmental Legal Assistance Center, Philippine Movement for Climate Justice, *Sanlakas*, and the Philippine Earth Justice Center, along with four individuals claiming to be aggrieved by a failure of executive rule-making, filed with the Supreme Court a petition for the

158. *Id.* at 3. Although agriculture contributes a substantial (30.8% in 2010) portion of the national emissions, this sector was excluded from the INDC because of issues concerning food security. Also, the country pursues mitigation actions as a function of adaptation.

159. RULES OF PROCEDURE FOR ENVIRONMENTAL CASES, A.M. No. 09-6-8-SC (Apr. 13, 2010).

160. *Id.* rule 7.

issuance of a writ of continuing mandamus with a prayer for a temporary environmental protection order to, among others: (1) compel the Department of Energy (DOE) and the Department of Environment and Natural Resources (DENR) to implement their legal mandate to increase the share of renewables in the Philippines' energy mix and to review and revise environmental standards to protect public health against the adverse impacts of fossil fuel combustion, and (2) enjoin the DENR and DOE from issuing permits for the construction of new coal-fired power plants in the country.[161] The petitioners accuse the two executive agencies of being remiss in their duty to implement the Clean Air Act and the Renewable Energy Act. The petitioners are thus asking the Court to order these agencies to perform their duties under the law.[162] The petition does not invoke the Public Trust Doctrine; it merely calls on the court to order agencies to promulgate rules to implement the law.[163]

If the Court's ruling in *Victoria Segovia, et al. v. The Climate Change Commission (CCC)*[164] is any indication of how it might rule in this case, the Court might deny the petition on the grounds that the executive agencies did *something*, even if the petitioners found their acts sorely lacking, to address the purpose of the law.

However, as the Idaho Supreme Court noted in *Kootenai Environmental Alliance, Inc. v. Panhandle Yacht Club, Inc.*,[165] "mere compliance by [agencies] with their legislative authority is not sufficient to determine if their actions comport with the requirements of the [P]ublic [T]ust [D]octrine. The [P]ublic [T]rust [D]octrine[,] at all times[,] forms the outer boundaries of

161. *Toribio R. Ortega Jr., et. al. v. Hon. Roy Cimatu* (SC, filed June 30, 2017). A scanned copy of the petition is *available at* https://es.scribd.com/document/352596003/Ortega-v-Cimatu. Subsequent page numbers referred to in the footnotes of this Article pertain to the page numbers of the scanned online copy. See also Jee Y. Geronimo, Environment groups file case vs DENR, DOE over coal plants proliferation, available at https://www.rappler.com/nation/174373-supreme-court-case-denr-doe-coal-plants (last accessed Jan. 26, 2018).

162. *Toribio R. Ortega Jr.* (pending), at 63-64.

163. Geronimo, *supra* note 161.

164. *Segovia, et al.*, G.R. No. 211010, at 13-14.

165. Kootenai Environmental Alliance, Inc. v. Panhandle Yacht Club, Inc., 671 P.2d 1085 (1983) (U.S.).

permissible government action with respect to public trust resources."[166] Therefore, agency action that meets statutory standards does not necessarily satisfy the Public Trust Doctrine. Courts have repeatedly distinguished statutory standards from the Public Trust Doctrine, noting that compliance with the former does not guarantee compliance with the latter.

B. Carbon Majors Petition filed with the Commission on Human Rights

In the Philippines, Greenpeace Southeast Asia and the Philippine Rural Reconstruction Movement filed a petition with the CHR requesting an investigation of the responsibility of the carbon majors for human rights violations or threats of violations resulting from climate change impacts.[167] Although no invocation was made of the Public Trust Doctrine since the respondents were private corporations — the so-called "carbon majors" responsible for a majority of the historical and current GHG emissions, most of which are publicly listed companies — the global organization Our Children's Trust filed an *amicus curiae* brief invoking the doctrine.[168]

It remains to be seen how the Supreme Court and the CHR will address the underlying issue in these two cases — compensating for legislative and executive inaction to deal with the biggest global crisis.

VII. PROSPECTS

Notably, despite being an active voice in climate negotiations, the Philippines has yet to enact legislation regulating GHG emissions. Despite a seemingly ambitious INDC,[169] it remains doubtful if the Philippines can

166. *Id.* at 1095.

167. Petition, dated May 9, 2016, *in* In Re: National Inquiry on the Impact of Climate Change on the Human Rights of the Filipino People and the Responsibility therefor, if any, of the "Carbon Majors," CHR-NI-2016-0001 (pending) (on file with CHR). A scanned copy of the petition is *available at* http://www.greenpeace.org/seasia/ph/PageFiles/735291/Petitioners-and-Annexes/CC-HR-Petition.pdf (last accessed Jan. 26, 2018).

168. Brief for Amicus Curiae Our Children's Trust, dated Dec. 6, 2016, *in* In Re: National Inquiry, CHR-NI-2016-0001 (pending) (on file with CHR). A scanned copy of the petition is *available at* https://business-humanrights.org/sites/default/files/documents/OCT%20Amicus%20Submission.pdf (last accessed Jan. 26, 2018).

169. The government is currently revisiting its 2015 INDC and has been conducting a multi-stakeholder review to determine the propriety of submitting a new NDC.

mitigate its emissions, particularly with its current economic development agenda, energy outlook, and the administration's belief that we should first develop, and deal with climate change later.[170]

True, the Philippines has enacted laws on climate change[171] and disaster risk reduction and management;[172] however, the full implementation of these laws has been lacking. Thus, a strong case can be made to leverage the Public Trust Doctrine to address climate change effectively and fully.

Finally, because atmospheric trust litigation invariably deals with intergenerational responsibility, and petitioners will likely claim to represent the interests of future generations, the question of standing must be addressed. In his Concurring Opinion in *Arigo v. Swift*,[173] which he echoed in his separate opinions in *Paje v. Casiño*,[174] *Resident Marine Mammals of the*

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170. Alanah Torralba, Group Warns of More Environmental Harm Due to Cimatu Order, *available at* http://verafiles.org/articles/group-warns-more-environmental-harm-due-cimatu-order (last accessed Jan. 26, 2018). It says,

> Duterte has repeatedly expressed his support for coal-fired power plants, which he believes are necessary for the country's industrialization.
>
> 'At this time, whoever is the president of the Philippines would always contend with coal. There's so much coal still that can be utilized by civilization for the next 50 to 70 years. And *to be worrying about pollution, well, we just have to come to terms with [the fact] that in our time, in our generation, it is really what it is. There is nothing you can do about it,'* Duterte said in a speech during the ground-breaking of a coal plant in Sarangani province last January.

Id. (emphasis supplied).

171. An Act Mainstreaming Climate Change into Government Policy Formulations, Establishing the Framework Strategy and Program on Climate Change, Creating for this Purpose the Climate Change Commission, and for Other Purposes [Climate Change Act of 2009], Republic Act No. 9729 (2009).

172. An Act Strengthening the Philippine Disaster Risk Reduction and Management System, Providing for the National Disaster Risk Reduction and Management Framework and Institutionalizing the National Disaster Risk Reduction and Management Plan, Appropriating Funds Therefor and for other Purposes [Philippine Disaster Risk Reduction and Management Act of 2010], Republic Act No. 10121 (2010).

173. Arigo v. Swift, 735 SCRA 102, 161 (2014) (J. Leonen, concurring opinion).

174. Paje v. Casiño, 749 SCRA 39, 245 (2015) (J. Leonen, concurring and dissenting opinion).

Protected Seascape of Tañon Strait v. Reyes,[175] and most recently in *Victoria Segovia, et al. v. The Climate Change Commission (CCC)*,[176] Justice Marvic Mario Victor F. Leonen (Justice Leonen) admonishes against speaking for "future generations" —

> [First], they run the risk of foreclosing arguments of others who are unable to take part in the suit, putting into question its representativeness. [Second], varying interests may potentially result in arguments that are bordering on political issues, the resolutions of which do not fall upon this [C]ourt. [Third], automatically allowing a class or citizen's suit on behalf of 'minors and generations yet unborn' may result in the oversimplification of what may be a complex issue, especially in light of the impossibility of determining future generation's true interests on the matter.[177]

In his separate opinions in the cases enumerated above, Justice Leonen advocated for abandoning the *Oposa* doctrine allowing present generations to represent those yet unborn or at least limiting its scope to the following situations:

> (1) [T]here is clear legal basis for the representative suit;
>
> (2) [T]here are actual concerns based squarely upon an existing legal right;
>
> (3) [T]here is no possibility of any countervailing interests existing within the population represented or those that are yet to be born; and
>
> (4) [T]here is an absolute necessity for such standing because there is threat or catastrophe so imminent that an immediate protective measure is necessary.[178]

It is submitted that, short of abandoning *Oposa*, even if the Court adopts Justice Leonen's opinion, atmospheric trust litigants will still be able to comply with the above standards if they sue to protect unborn generations from an uninhabitable earth. Rather than robbing future generations of their agency or autonomy, such litigants would ensure that these future

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175. Resident Marine Mammals of the Protected Seascape of Tañon Strait v. Reyes, 756 SCRA 513, 575 (2015) (J. Leonen, concurring opinion).

176. *Segovia, et al.*, G.R. No. 211010, Mar. 7, 2017, *available at* http://sc.judiciary.gov.ph/pdf/web/viewer.html?file=/jurisprudence/2017/march2017/211010_leonen.pdf (last accessed Jan. 26, 2018) (J. Leonen, concurring opinion).

177. *Arigo*, 735 SCRA at 176.

178. *Resident Marine Mammals of the Protected Seascape of Tañon Strait*, 756 SCRA at 587 (citing *Arigo*, 735 SCRA at 178-79 (J. Leonen, concurring opinion)).

generations have the opportunity to exercise both agency *and* autonomy by ensuring that the earth's ecology is balanced and the climate system is stable enough for them to survive in.

A close examination of how the Public Trust Doctrine has been used historically reveals that it is a medium for democratization — where courts perceive problems in the legislative and administrative processes, they rely on the State's public trust duty to remedy them.[179] As Professor Sax notes, "the court's attitudes and outlook are critical. The 'public trust' has no life of its own and no intrinsic content. It is no more — and no less — than a name courts give to their concerns about the insufficiencies of the democratic process."[180]

Moreover, as Dr. James Hansen, former Director of the National Aeronautics and Space Administration's Goddard Institute for Space Studies, has admonished, the "[f]ailure to act with all deliberate speed in the face of the clear scientific evidence of the danger functionally becomes a decision to eliminate the option of preserving a habitable climate system."[181] With no less than human survival on the line, courts can perhaps find comfort in the Public Trust Doctrine's long history and scrutinize the actions, or insufficiency of actions, of their co-equal branches. Avoiding a climate catastrophe is not only their legal, but also their moral, imperative.[182]

179. Sax, *supra* note 19, at 509.

180. *Id.* at 521.

181. Wood & Woodward IV, *supra* note 1, at 635 (citing Brief for *Amicus Curiae* Dr. James Hansen, at 8, *in* Alec L., et al. v. Lisa P. Jackson, et al., No. C-11–2203 EMC 2011 (N.D. Cal.) (2011) (U.S.)).

182. Oslo Principles on Global Climate Change Obligations, *supra* note 111, at 1.