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The EPA as a Catalyst for the Development of Global Environmental Law

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THE EPA AS A CATALYST FOR THE DEVELOPMENT OF GLOBAL ENVIRONMENTAL LAW

Robert V. Percival[†]

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INTRODUCTION

The EPA’s global influence has been one of the Agency’s most important, and least appreciated, roles. Throughout most of the Agency’s nearly half-century history the EPA has served as a role model for countries seeking to upgrade their environmental laws and policies. The Agency’s creation in 1970 inspired the establishment of national environmental agencies throughout the world.¹ The EPA has played a

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1. See Gina McCarthy, *Why EPA Is the Gold Standard for Environmental Protection Around the World*, MEDIUM (July 5, 2016), <https://medium.com>

significant role in the negotiation of international environmental treaties,² the response to global environmental disasters,³ and as a source of shared scientific and technical expertise.⁴ The EPA is a major reason why the United States has long been considered to be, at least until recently, a global environmental leader.⁵ This article reviews the history of how the EPA has served as a catalyst for the development of global environmental law.⁶

I. THE EPA AND THE GLOBAL ENVIRONMENT: A HISTORY

A. *Establishment of the EPA*

The EPA was not the first federal environmental agency created in the United States. The National Environmental Policy Act (NEPA),⁷ signed into law on national television by President Richard Nixon on New Year's Day 1970, created the Council on Environmental Quality (CEQ) in the Executive Office of the President.⁸ Although the NEPA had not been a White House initiative, President Richard Nixon gave it “strong budgetary support” and “a very visible role in formulating environmental policy.”⁹ Russell E. Train, who previously had served as Undersecretary of the Department of Interior, became the first

.com/epa-forward/why-epa-is-the-gold-standard-for-environmental-protection-around-the-world-b17b544bad1d [https://perma.cc/R8WA-C8PG].

2. Ruth Greenspan Bell, *EPA's International Assistance Efforts: Developing Effective Environmental Institutions and Partners*, 24 ENVTL. L. REP. NEWS & ANALYSIS 10,593, 10,593 (1994).
3. *Id.* at 10,594.
4. *Id.* at 10,594–95.
5. Jutta Brunneé, *The United States and International Environmental Law: Living with an Elephant*, 15 EUR. J. INT'L L. 617, 621, 633 (2004).
6. “Global environmental law” is a term I have used to describe the new reality that, in recent years, countries are borrowing legal and regulatory innovations from one another, blurring traditional distinctions between domestic and international law, and government and private non-governmental organizations are collaborating on initiatives that blur distinctions between public and private law. *See, e.g.*, Robert V. Percival, *The Globalization of Environmental Law*, 26 PACE ENVTL. L. REV. 451, 452 (2009); Tseming Yang & Robert V. Percival, *The Emergence of Global Environmental Law*, 36 ECOLOGY L.Q. 615, 616–17 (2009).
7. 42 U.S.C. § 4321–47 (2012).
8. COUNCIL ON ENVTL. QUALITY, TWENTY-FIFTH ANNIVERSARY REP. 7 (1995).
9. Russell E. Train, *The Environmental Record of the Nixon Administration*, 26 PRESIDENTIAL STUD. Q. 185, 186 (1996).

chairman of the CEQ.¹⁰ With the encouragement of President Nixon, the CEQ quickly took the lead on international environmental issues. In its first annual report in 1970, the CEQ presciently devoted a chapter to climate change at a time when there was scant public mention of the topic, stating that “world-wide recognition should be given to the long-term significance of manmade atmospheric alterations.”¹¹

The EPA was established on December 2, 1970, when, after extensive congressional hearings, President Nixon’s July 1970 reorganization plan took effect.¹² The Agency acquired responsibility for environmental issues previously divided between several cabinet agencies (air pollution and waste management from the Department of Health Education & Welfare, water pollution from the Department of Interior, pesticide registration from the Department of Agriculture, and radiation monitoring and regulation from the Atomic Energy Commission).¹³ William Ruckelshaus became the first EPA Administrator on December 4, 1970.¹⁴ Later that month, Congress gave the EPA broad, new national regulatory responsibilities when it enacted the Clean Air Act Amendments of 1970.¹⁵ From the start, the EPA had an Office of International Affairs, which was headed by Fitzhugh Green from 1970–1976.¹⁶

The EPA was created at a time of unprecedented concern over the environment. The first Earth Day had been held in the United States on April 22, 1970.¹⁷ The establishment of the EPA helped encourage other countries to create national environmental agencies. Virtually every country in the world now has a national environmental agency. By 2019, the United Nations Environment Programme (UNEP) found that a total of 164 countries had created national environmental

10. *Russell E. Train: Oral History Interview*, EPA, <https://archive.epa.gov/epa/aboutepa/Russell-e-train-oral-history-interview.html> [<https://perma.cc/B2GF-RM6V>] (last updated Sept. 6, 2018).

11. 1970 COUNCIL ON ENVTL. QUALITY ANN. REP. 104.

12. Train, *supra* note 9, at 188.

13. *Id.*

14. *Origins of the EPA*, EPA, <https://epa.gov/history/origins-epa> [<https://perma.cc/A2SP-32U6>] (last updated Nov. 19, 2018).

15. Train, *supra* note 9, at 188.

16. Obituary, *Fitzhugh Green, 72, Ex-U.S.I.A. Official and EPA Leader*, N.Y. TIMES (Sept. 8, 1990), <https://www.nytimes.com/1990/09/08/obituaries/fitzhugh-green-72-ex-usia-official-and-epa-leader.html> [<https://perma.cc/FJ6Z-VWMR>].

17. *About Us: The History of Earth Day*, EARTHDAY.ORG, <https://earthday.org/history/> [<https://perma.cc/U63N-DJBT>] (last visited June 19, 2020).

ministries, while twenty-two others had set up environmental entities as independent agencies.¹⁸

In his report to Congress on United States Foreign Policy for the 1970s, President Nixon noted that global environmental concerns had added “a new dimension” to U.S. foreign policy.¹⁹ He declared that “our shared and transcendent interest in the livability of our common home, the earth” required global cooperation that “has now become a prime task of American leadership.”²⁰ Russell Train noted that U.S. credibility on international environmental issues was enhanced because “the CEQ and [the] EPA, rather than the State Department, took the lead in the international environmental field.”²¹ He concluded that “the active engagement of the responsible environmental officials in international matters gave tremendous stimulus worldwide to the establishment of high-level agencies responsible for environmental policy and management.”²²

One of the EPA’s first regulatory initiatives with global repercussions was a decision by Administrator William Ruckelshaus to ban use of the pesticide dichlorodiphenyltrichloroethane, also known as DDT.²³ This pesticide was a persistent and bioaccumulative chemical that built up in the food chain,²⁴ resulting in the death of birds that inspired Rachel Carson’s *Silent Spring*.²⁵ A major national environmental non-governmental organization (NGO), the Environmental Defense Fund, was founded by scientists in 1967 with the explicit goal of getting DDT banned.²⁶ On June 14, 1972, Ruckelshaus issued an

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18. U.N. ENV’T, ENVIRONMENTAL RULE OF LAW: FIRST GLOBAL REPORT 2 (2019), *available at* <https://unenvironment.org/resources/assessment/environmental-rule-law-first-global-report> [<https://perma.cc/YDP5-Q97M>].
 19. Second Annual Report to the Congress on United States Foreign Policy, 1971 PUB. PAPERS 219, 220 (Feb. 25, 1971).
 20. *Id.* at 331.
 21. Train, *supra* note 9, at 193.
 22. *Id.*
 23. *See id.* at 192.
 24. Marc Lallanilla, *History and Impact of the Pesticide DDT*, SPRUCE (Oct. 18, 2019), <https://www.thespruce.com/what-is-ddt-history-impacts-1708897> [<https://perma.cc/4M7A-F7QY>].
 25. *Id.*
 26. *Our Story: How EDF Got Started*, ENVTL. DEF. FUND, <http://edf.org/about/our-history> [<https://perma.cc/QKU4-ZHRL>] (last visited June 20, 2020).

order banning most uses of DDT.²⁷ The ban took effect at the end of 1972.²⁸

B. The 1972 Stockholm Conference

Rising global concern for the environment spawned the very first global environmental summit in June 1972, the Stockholm Conference on Environment and Development, sponsored by the United Nations.²⁹ The United States sent a sixty-three-member delegation to the conference that included twenty-eight technical advisers and twelve members of Congress.³⁰ The delegation was led by CEQ Chair Russell Train with Christian A. Herter, Jr., Special Assistant for Environmental Affairs, serving as the vice chairman.³¹ EPA Administrator William Ruckelshaus and Secretary of Interior Rogers Morton also were members of the delegation.³²

Train was elected to serve as a vice chair of the conference, which was attended by representatives of 113 countries, 19 intergovernmental agencies, and more than 400 NGOs.³³ The People's Republic of China sent a large delegation to the conference. China's representatives and those of other developing countries were initially skeptical of environmental concerns and had threatened to boycott the conference.³⁴ Indian Prime Minister Indira Gandhi observed that smoke coming out of a factory signified jobs to her and famously asked, "Are not poverty and need the greatest polluters?"³⁵

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27. *DDT Ban Takes Effect*, EPA, <https://archive.epa.gov/epa/aboutepa/ddt-ban-takes-effect.html> [<https://perma.cc/5Z2R-2VR4>] (last updated Aug. 5, 2016).
28. *Id.*
29. See G.A. Res. 2994 (XXVII) (Dec. 15, 1972).
30. See *U.S. Picks Delegates to U.N. Conference on the Environment*, N.Y. TIMES (May 14, 1972), <https://nyti.ms/1RbYggf> [<https://perma.cc/X97H-EB4A>]; Frank E. Eglar, *Stockholm Conference on the Human Environment: The U.S. Appraisal*, 53 ECOLOGICAL SOC'Y AM. 5 (1972).
31. *U.S. Picks Delegates to U.N. Conference on the Environment*, *supra* note 30.
32. *Id.*
33. Medani P. Bhandari, *The Role of International Organization in Addressing Climate Change Issues and Creation of Intergovernmental Panel on Climate Change (IPCC)*, ADVANCES AGRIC. & ENVT. SCI. 27, 28 (2018).
34. See Richard Black, *Stockholm: Birth of the Green Generation*, BBC (June 4, 2012) <https://www.bbc.com/news/science-environment-18315205> [<https://perma.cc/9V5F-83E5>].
35. Indira Gandhi, Prime Minister of India, Speech to Plenary Session of United Nations Conference on Human Environment (June 14, 1972), available at <https://www.inc.in/en/media/speech/the-human-environment> [<https://perma.cc/X4RN-JUCH>].

The conference resulted in the issuance of the Stockholm Declaration, a statement of global environmental principles endorsed by representatives of all the countries who attended.³⁶ Prior to the conference, the United States had pushed for it to endorse the negotiation of global treaties to control ocean dumping and to limit trade in endangered species.³⁷ This proved successful as the conference endorsed the negotiation of what became the London Dumping Convention and the Convention on International Trade in Endangered Species of Fauna and Flora (CITES).³⁸ The conference also led to creation of UNEP.³⁹ Overall, the Stockholm Conference confirmed a strong global consensus on the importance of environmental protection and the possibilities of progress through global cooperation. Upon returning to the United States, Train declared the conference a “very definite success” and stated that the United States had “gained really all of its important objectives at the conference.”⁴⁰

C. *Environmental Cooperation with Other Countries*

Even before the Stockholm conference, the United States had launched bilateral initiatives to promote environmental cooperation. When President Nixon met with Japanese Prime Minister Eisaku Sato during the summer of 1970, the two leaders pledged to work cooperatively to help each country solve its massive urban air-pollution problems.⁴¹ This meeting launched several environmental exchanges

36. See G.A. Res. 2994 (XXVII) (Dec. 15, 1972).

37. See Train, *supra* note 9, at 193.

38. See INT’L MAR. ORG., ORIGINS OF THE LONDON CONVENTION 3–4 (2012), available at http://www.imo.org/fr/KnowledgeCentre/ReferencesAndArchives/IMO_Conferences_and_Meetings/London_Convention/VariouusArticlesAndDocumentsAboutTheLondonConvention/Documents/Origins%20of%20the%20London%20Convention%20-%20Historic%20events%20and%20documents%20%20M.%20Harvey%20September%202012.pdf [<https://perma.cc/2Q7M-5V9P>]; John E. Scanlon, *CITES: From Stockholm in ’72 to Rio+20—Back to the Future*, INT’L INST. FOR SUSTAINABLE DEV. (July 6, 2012), <http://sdg.iisd.org/commentary/guest-articles/cites-from-stockholm-in-%E2%80%9872-to-rio20-back-to-the-future/> [<https://perma.cc/K2HW-X7ZV>].

39. Philippe Boudes, *United Nations Conference on the Human Environment*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/topic/United-Nations-Conference-on-the-Human-Environment> [<https://perma.cc/U5NG-97NX>] (last visited June 21, 2020).

40. OFFICE OF MEDIA SERVS., DEP’T OF STATE, STOCKHOLM CONFERENCE ON THE HUMAN ENVIRONMENT: THE U.S. APPRAISAL (1972), available at <https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.2307/20165916> [<https://perma.cc/28TN-H5XW>].

41. Train, *supra* note 9, at 195.

between the two countries that ultimately spawned bilateral environmental agreements.⁴²

The most significant bilateral environmental agreement launched during the 1970s was the U.S.-U.S.S.R. Agreement on Cooperation in the Field of Environmental Protection.⁴³ Signed by President Nixon and Soviet President Nikolai Podgorny on May 23, 1972, the agreement promised cooperation “aimed at solving the most important aspects of the problems of the environment.”⁴⁴ The agreement identified eleven subject areas for study, including air, water and marine pollution, nature reserves, the “influence of the environmental changes on climate,” and “legal and administrative measures for protecting environmental quality.”⁴⁵ Nearly a quarter of a century later, Russell Train described it as “the most comprehensive, bilateral, environmental agreement ever attempted.”⁴⁶

While he was CEQ Chairman, Train served as co-chair with a Soviet official of a Joint Committee to implement the agreement, which met annually in either Moscow or Washington, D.C.⁴⁷ After Train was named EPA Administrator in 1973, he continued to serve as co-chair of the Joint Committee and the EPA became the secretariat for U.S. implementation of the agreement.⁴⁸ At times as many as 700 scientists and other environmental professionals participated in exchanges under the auspices of the agreement,⁴⁹ which in 1976 resulted in the adoption of a migratory-bird treaty between the two countries.⁵⁰ Coordination of climate research became an important area of cooperation during the late 1970s.

Train observed that by the end of the Nixon Administration, “the United States was recognized and accepted as the world leader in environmental protection programs . . . based both upon the leadership role that the [United States] played in international environmental matters but, even more importantly, on the credibility afforded by our domestic environmental policy and action.”⁵¹ Yet, according to Train, President Nixon himself had “little appreciation of the significance of

42. *Id.*

43. *Id.*

44. Agreement on Cooperation in the Field of Environmental Protection Between the United States of America and the Union of Soviet Socialist Republics, U.S.-U.S.S.R., May 23, 1972, 23 U.S.T. 845.

45. *Id.*

46. Train, *supra* note 9, at 195.

47. *See* EPA, *supra* note 10.

48. *Id.*

49. Train, *supra* note 9, at 195.

50. *Id.*

51. *Id.*

his achievements in the environmental area,⁵² as reflected in his scant and disdainful treatment of them in his memoirs.⁵³ This led Train to “the inescapable conclusion” that Nixon “had little personal interest in or enthusiasm for the environmental program his administration pursued so vigorously and effectively.”⁵⁴

D. The Ford and Carter Administrations

In his memoirs, Russell Train reports that when the EPA was established in 1970, “Bill Ruckelshaus and I agreed, at his suggestion, that [the] CEQ continue to carry the ball in most international matters.”⁵⁵ But Train reports that after he moved from the CEQ to become EPA Administrator in 1973, he “took the international portfolio with [him] at the explicit direction of President Nixon.”⁵⁶ Train reports that when Vice President Gerald Ford assumed the presidency upon Nixon’s resignation in 1974, Ford confirmed this understanding in a letter dated October 17, 1974.⁵⁷ Thus, during the period from 1970–1973, the CEQ took the lead on international issues, while looking to the EPA and the National Oceanic and Atmospheric Administration (NOAA) for expertise and support. However, after Train was confirmed as EPA Administrator, the EPA assumed primary responsibility for international environmental initiatives as well.⁵⁸

During the administration of President Jimmy Carter, Douglas Costle served as EPA Administrator.⁵⁹ Environmental cooperation between the United States and the Soviet Union continued with Costle serving as co-chair of the U.S.-U.S.S.R. Joint Committee.⁶⁰ Environmental cooperation with China had begun, and Costle served as the chair of the U.S.-China Environmental Protection Protocol.⁶¹

52. *Id.* at 196.

53. *Id.* at 195–96.

54. *Id.* at 196.

55. RUSSELL E. TRAIN, *POLITICS, POLLUTION AND PANDAS* 122 (2003).

56. *Id.*

57. *Id.* at 342 n.2.

58. *Id.* at 122–23.

59. *Douglas M. Costle: Oral History Interview*, EPA, <https://archive.epa.gov/epa/aboutepa/douglas-m-costle-oral-history-interview.html> [<https://perma.cc/CFG3-8SEK>] (last updated Sept. 8, 2016).

60. THE JIMMY CARTER PRESIDENTIAL LIBRARY & MUSEUM, DOUGLAS M. COSTLE PAPERS: A GUIDE TO HIS PAPERS AT THE JIMMY CARTER LIBRARY 2 (2016), *available at* https://www.jimmycarterlibrary.gov/assets/documents/findingaids/Costle_Douglas.pdf [<https://perma.cc/ARK3-H3HW>].

61. *Id.*

E. The Reagan Administration, Lead Phasedown, and the Montreal Protocol

Upon taking office in 1981, President Ronald Reagan launched a campaign to cut back on environmental regulation.⁶² This move ultimately produced a backlash that resulted in some significant environmental achievements. President Reagan famously had declared that “trees cause more pollution than automobiles do.”⁶³ This spawned a demonstration in front of the White House where people dressed up in tree costumes held signs reading, “cut me down before I kill again.”⁶⁴

President Reagan appointed Vice President George H. W. Bush to chair a Task Force on Regulatory Relief⁶⁵ that asked corporate CEOs, particularly those in the oil industry, to nominate regulations for elimination.⁶⁶ The Task Force ultimately directed the EPA to propose relaxing or rescinding the Agency’s first limits on the amount of lead additives that could be placed in gasoline,⁶⁷ a regulation that had been upheld in 1976 in a landmark en banc decision by the U.S. Court of Appeals for the District of Columbia Circuit.⁶⁸ This generated such a backlash that the EPA ultimately went in the opposite direction and mandated that nearly all lead additives be phased out of gasoline.⁶⁹ Ultimately, in the 1990 Clean Air Act Amendments, Congress prohibited the use of all lead additives in gasoline effective January 1, 1996.⁷⁰ As discussed below, this decision spawned a global lead phaseout

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62. Leif Fredrickson et al., *History of US Presidential Assaults on Modern Environmental Health Protection*, 108 PUB. HEALTH THEN & NOW 595, 596 (2018).
63. Mark Shields, *A Little Perspective, Please*, CNN (Dec. 29, 2003, 2:32 PM), <http://www.cnn.com/2003/ALLPOLITICS/12/29/column.shields.opinion.perspective/> [<https://perma.cc/34XV-SW37>].
64. *Id.*
65. William Greider, *When Big Business Needs a Favor, George Bush Gets the Call*, ROLLING STONE (Apr. 12, 1984, 12:00 PM), <https://www.rollingstone.com/politics/politics-news/when-big-business-needs-a-favor-george-bush-gets-the-call-240823/> [<https://perma.cc/3P9G-CPK4>].
66. *Id.*
67. Kenneth B. Noble, *The Politics of Safety Has a Life of Its Own*, N.Y. TIMES (July 15, 1984), <https://www.nytimes.com/1984/07/15/weekinreview/the-politics-of-safety-has-a-life-of-its-own.html> [<https://perma.cc/R9MP-WXEU>].
68. *Ethyl Corp. v. EPA*, 541 F.2d 1, 54–55 (D.C. Cir. 1976).
69. *See* Noble, *supra* note 67; *EPA Sets New Limits on Lead in Gasoline*, EPA (Mar. 4, 1985), <https://archive.epa.gov/epa/aboutepa/epa-sets-new-limits-lead-gasoline.html> [<https://perma.cc/K9Z7-C4HH>].
70. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 220, 104 Stat. 2399, 2500 (1990) (codified as amended at 42 U.S.C. 7545 (2012)).

that has proven to be one of the most successful environmental initiatives in world history.

During President Reagan's second year in office, the United Nations hosted its second global environmental summit.⁷¹ Following the first summit in Stockholm in June 1972, the U.N. General Assembly, in December 1972, had created the UNEP, headquartered in Nairobi, Kenya.⁷² UNEP was the first U.N. agency to be based on the African continent. The U.N.'s 1982 environmental summit was held in Nairobi.⁷³ President Reagan appointed EPA Administrator Anne Gorsuch to lead the U.S. delegation to the Nairobi conference.⁷⁴ She was greeted skeptically by other delegates when she reportedly lectured developing countries to rely on market forces to solve their environmental problems.⁷⁵

Sentiment in the developing world had shifted since the 1972 Stockholm conference, with developing countries now demanding that developed countries take action to protect the environment.⁷⁶ President Reagan had also appointed one of his daughters to the U.S. delegation, which was widely interpreted as indicating that he placed a low priority on global environmental protection.⁷⁷ Yet, ultimately, President Reagan was persuaded of the importance of adopting global measures to phase out ozone-depleting substances.

When an environmental impact statement was performed in 1978 for the U.S. space shuttle program, researchers examined the effects of chemical emissions from NASA's rockets on the upper atmosphere.⁷⁸ University of Michigan scientists Richard Stolarski and Ralph Cicerone discovered that chlorine released in the stratosphere could cause a

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71. William K. Stevens, *Earth Summit Finds the Years of Optimism Are a Fading Memory*, N.Y. TIMES (June 9, 1992), <https://www.nytimes.com/1992/06/09/washington/earth-summit-finds-the-years-of-optimism-are-a-fading-memory.html> [https://perma.cc/K4K7-H2SS].
72. STANLEY JOHNSON, UNEP: THE FIRST 40 YEARS 39, 49 (2012), available at https://wedocs.unep.org/bitstream/handle/20.500.11822/8350/-UNEP_%20the%20first%2040%20years-2012UNEP-%20the%20first%2040%20years_2012.pdf?sequence=3&%3BisAllowed= [https://perma.cc/M8EM-BC7J].
73. Stevens, *supra* note 71.
74. See Eva Hoffman & William C. Rhoden, *A Reminder: The Environment Is International*, N.Y. TIMES (May 16, 1982), <https://www.nytimes.com/1982/05/16/weekinreview/ideas-trends-in-summary-a-reminder-the-environment-is-international.html> [https://perma.cc/9RT6-R9HL].
75. *Id.*
76. *Id.*
77. *Earth Summits*, CAPS-CONFERENCE.EU (Nov. 13, 2017), <https://caps-conference.eu/earth-summits/> [https://perma.cc/TBV5-HRRG].
78. NASA, ENVIRONMENTAL IMPACT STATEMENT FOR THE SPACE SHUTTLE PROGRAM 55 (1978), available at <https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19810008106.pdf>.

complex chemical reaction that would destroy the earth's protective ozone layer, which shields humans from dangerous ultraviolet radiation.⁷⁹ Initially, this finding was not considered too alarming because rockets associated with the space shuttle program released virtually no chlorine.⁸⁰ But in 1974, scientists Sherwood Roland and Mario Molina discovered that chlorofluorocarbons (CFCs), a class of widely used chemicals, were so durable that after being released into the environment they would migrate into the upper atmosphere where solar radiation would cause them to release large amounts of chlorine, severely damaging the ozone layer.⁸¹

Roland and Molina's warning was based solely on an untested theory when it was released, but the U.S. public's reaction was to stop buying products that contained CFCs.⁸² In March 1978, the EPA, the Food and Drug Administration, and the Consumer Product Safety Commission jointly banned all nonessential uses of CFCs.⁸³ This regulatory action, which effectively banned half of CFC production in the United States (worth \$3 billion),⁸⁴ made the United States the world leader in responding to the threat of ozone-depletion. By contrast, Europeans distrusted the theory of ozone depletion and expressed concerns that the United States was motivated by a desire to gain an economic advantage over them.⁸⁵

The Governing Council of UNEP, which consisted of fifty-eight countries elected by the U.N. General Assembly,⁸⁶ in 1980, directed UNEP to consider what measures could be undertaken to protect the stratospheric ozone layer from depletion.⁸⁷ In 1981, the Council called for the negotiation of a global convention to accomplish this end.⁸⁸ Although UNEP initially pursued the simultaneous adoption of a

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79. RICHARD ELLIOT BENEDICK, *OZONE DIPLOMACY: NEW DIRECTIONS IN SAFEGUARDING THE PLANET* 10 (enlarged ed. 1998).
80. NASA, *supra* note 78, at 60–61.
81. Mario J. Molina & F.S. Rowland, *Stratospheric Sink for Chlorofluoromethanes: Chlorine Atom-catalysed Destruction of Ozone*, 249 NATURE 810, 810 (1974).
82. DAVID VOGEL, *THE POLITICS OF PRECAUTION: REGULATING HEALTH, SAFETY, AND ENVIRONMENTAL RISKS IN EUROPE AND THE UNITED STATES* 120–21 (2012).
83. *Id.* at 122.
84. *Id.* at 122–23.
85. *Id.* at 122.
86. JOHNSON, *supra* note 72, at 34.
87. Carol Annette Petsonk, *The Role of the United Nations Environment Programme (UNEP) in the Development of International Environmental Law*, 5 AM. U. J. INT'L L. & POL'Y. 351, 368 (1990).
88. *Id.*

framework convention and a protocol to control CFCs,⁸⁹ lingering scientific uncertainty and concern over the costs of a CFC phaseout resulted in the initial adoption in 1985 of a framework convention, the Vienna Convention for Protection of the Ozone Layer.⁹⁰ This treaty established a framework for coordinating research on ozone depletion in support of future regulatory action.⁹¹ Shortly after the Vienna Convention was adopted, the first hard evidence emerged confirming the existence of an ozone hole.⁹²

As noted above, Ronald Reagan had become president in 1981 and had launched efforts to roll back environmental regulations. Reagan's Under Secretary of State for Economic Affairs, Allen Wallis, opposed the Vienna Convention out of fear that it would encourage the use of international agreements as a means for circumventing domestic deregulation.⁹³ Even though companies producing CFCs opposed regulation, because the Vienna Convention was largely focused on coordinating research on ozone depletion, last-minute intervention by private-sector actors convinced the Reagan administration to allow the U.S. delegation to sign it.⁹⁴

In the two years between the signing of the Vienna Convention and negotiation of the Montreal Protocol on Substances that Deplete the Ozone Layer,⁹⁵ the EPA spearheaded research on ozone depletion. In late 1985, the EPA released a detailed Stratospheric Ozone Protection Plan and it commissioned papers from experts on all aspects of the problem.⁹⁶

At a summit meeting in November 1985, President Reagan and Soviet Premier Mikhail S. Gorbachev approved a detailed agreement for further cooperation and research between the United States and the U.S.S.R. on environmental issues.⁹⁷ It was noted at the time that the Soviet Union already had “become involved in an effort to deal with the increasing levels of carbon dioxide and other man-made gases that are contributing to the ‘greenhouse effect’ that is expected to warm the

89. *Id.*

90. *Id.* at 367–68.

91. *Id.* at 368.

92. *Id.*

93. BENEDICK, *supra* note 79, at 46.

94. *Id.* at 46–47.

95. Sept. 16, 1987, 80 Stat. 271, 1522 U.N.T.S. 3.

96. BENEDICK, *supra* note 79, at 49.

97. Philip Shabecoff, *U.S.-Soviet Accord on the Environment Approved in Geneva*, N.Y. TIMES (Dec. 13, 1985), <https://www.nytimes.com/1985/12/13/us/us-soviet-accord-on-the-environment-approved-in-geneva.html> [<https://perma.cc/9ZBX-JL5B>].

atmosphere, melt ice caps and cause a rise in sea levels in the next century.”⁹⁸

The EPA played a role in responding to a global environmental disaster in April 1986: the Chernobyl nuclear accident.⁹⁹ President Regan gave the EPA the responsibility for leading the U.S. response to the nuclear meltdown at the Chernobyl nuclear power plant in Ukraine.¹⁰⁰ As fallout from the accident circled the globe, the EPA monitored radiation levels, held daily press conferences to inform the public, and assembled a panel of experts to advise on how to prevent radiation contamination of the food supply.¹⁰¹ EPA scientists went to Europe to monitor levels of radioactivity around U.S. embassies, and they assisted Soviet experts in measuring radioactivity in the Black Sea and Kiev Reservoir.¹⁰² The EPA also developed a mobile radiation laboratory for Ukraine.¹⁰³

On October 17, 1986, President Reagan signed into law the Emergency Planning and Community Right-to-Know Act (EPCRA).¹⁰⁴ Enacted as a response to the December 1984 Bhopal tragedy, the EPCRA created the Toxic Release Inventory (TRI), an annual, publicly available registry of the quantities of releases of toxic chemicals into the environment.¹⁰⁵ This regulatory innovation has been emulated by other countries, including Canada and the E.U., which have their own inventories of chemical releases.¹⁰⁶ In 1991, the EPA reported that it

98. *Id.*

99. *Radiological Emergency Response: Planning and Past Responses*, EPA, <https://www.epa.gov/radiation/radiological-emergency-response-planning-and-past-responses> [https://perma.cc/82VA-3N84] (last updated Sept. 23, 2019).

100. *Id.*

101. *Id.*

102. *Historical Radiological Event Monitoring: Chernobyl*, EPA, <https://www.epa.gov/radnet/historical-radiological-event-monitoring#tab-2> [https://perma.cc/D36W-BM3G] (last updated Aug. 23, 2019).

103. EPA, DARK PAST, BRIGHT FUTURE: ENVIRONMENTAL COOPERATION IN CENTRAL AND EASTERN EUROPE AND THE NEW INDEPENDENT STATES (1998), available at <https://www.epa.gov/international-cooperation/dark-past-bright-future-environmental-cooperation-central-and-eastern> [https://perma.cc/KN7P-TF4R].

104. Pub. L. No. 99-499, 100 Stat. 1728 (1986) (codified at 42 U.S.C. §§ 11001–50 (2012)).

105. 42 U.S.C. § 11023 (2012); *What Is the Toxics Release Inventory?*, EPA, <https://www.epa.gov/toxics-release-inventory-tri-program/what-toxics-release-inventory> [https://perma.cc/M5BN-79CT] (last updated Jan. 16, 2020).

106. *The U.S. TRI Program: A Leader in International Chemical Release Reporting*, EPA, <https://www.epa.gov/toxics-release-inventory-tri-program/>

was helping “Mexico, Europe, Scandinavia and Japan design such programs.”¹⁰⁷

In September 1986, the EPA had helped UNEP organize a global workshop on ozone depletion hosted by the United States.¹⁰⁸ The EPA’s efforts helped convince other countries of the need for a global phaseout of ozone-depleting substances.¹⁰⁹ But the Agency faced fierce opposition from other parts of the administration. During inter-agency meetings, Interior Secretary Donald Hodel opposed regulation of CFCs by arguing that people could avoid skin cancer simply by wearing “personal protection,” such as hats and sunglasses.¹¹⁰ His aides leaked this argument to the media, thinking it would be persuasive, but it had precisely the opposite effect, generating widespread mockery and a famous cartoon of fish and wildlife species wearing such accoutrements.¹¹¹

After the President’s Council of Economic Advisers released a cost-benefit analysis showing that the benefits of preventing skin-cancer deaths greatly outweighed the costs of CFC controls,¹¹² Hodel tried a new tactic: arguing that the United States should condition ratification of any global agreement on all developing countries agreeing to equally stringent controls.¹¹³ Ultimately, Hodel and other opponents of a strong global treaty were overruled by President Reagan at a White House meeting on June 18, 1987. President Reagan, who previously had skin cancers removed in 1985 and earlier in 1987,¹¹⁴ sided with EPA Administrator Lee Thomas and Secretary of State George Shultz.¹¹⁵

On September 8, 1987, representatives of sixty countries, half of them developing countries, convened in Montreal for final negotiations on the Montreal Protocol on Substances that Deplete the Ozone

tri-around-world [<https://perma.cc/6MWE-6X4R>] (last updated Apr. 19, 2019).

107. MARY GRAHAM, *DEMOCRACY BY DISCLOSURE: THE RISE OF TECHNO-POPULISM* 46 (2002).

108. BENEDICK, *supra* note 79, at 47.

109. *Id.* at 47–50.

110. *Id.* at 58, 60.

111. *Id.* at 60; *see also* Herbert Block, *Interior Sec. Hodel Suggests Sunglasses, Hats and Suntan Lotion as an Alternative to World Agreement to Save the Ozone Layer* * and Don't Forget—in Case of Nuclear War, Just Dig a Hole*, in HERBERT L. BLOCK COLLECTION (Jun. 3, 1987), *available at* LIBRARY OF CONG., <http://hdl.loc.gov/loc.pnp/hlb.11452> [<https://perma.cc/7RFR-ANCJ>].

112. Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENVTL. L. REV. 1, 15 (2007).

113. BENEDICK, *supra* note 79, at 63.

114. *Id.* at 67.

115. *Id.* at 65–67.

Layer.¹¹⁶ EPA Administrator Lee Thomas played a key role in the final negotiation because the European Union's representatives were not enthused about phasing out CFCs; they thought it was a U.S. plot to get a trade advantage.¹¹⁷ Thomas reportedly confronted an E.U. delegate in a bar in Montreal and worked things out over drinks.¹¹⁸ On September 16, 1987, Thomas signed the Montreal Protocol on behalf of the United States, which he later said was the most satisfying thing he did while EPA Administrator.¹¹⁹

F. The George H. W. Bush Administration, Exxon Valdez Oil Spill, and the 1992 Rio Earth Summit

After George H. W. Bush became president in 1989, EPA Administrator William Reilly continued the Agency's cooperation with other countries. Barely two months after taking office, the Bush administration was forced to confront a major domestic environmental disaster: the *Exxon Valdez* oil spill. On March 24, 1989, an oil tanker owned by the Exxon Corporation ran aground on Bligh Reef in Prince William Sound, Alaska, spilling more than eleven million gallons of oil.¹²⁰ Public outrage over the spill broke a lengthy legislative stalemate, resulting in the adoption of the Oil Pollution Act of 1990 in August of that year.¹²¹ Over a twenty-year period, the legislation phased in a requirement that oil tankers operating in U.S. waters have double hulls.¹²² The success of this requirement, which has helped to substantially reduce the amount of oil spilled from oil tankers, helped persuade the International Maritime Organization to adopt it on a global basis.¹²³

116. Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, 80 Stat. 271, 1522 U.N.T.S. 3; BENEDICK, *supra* note 79, at 74.

117. BENEDICK, *supra* note 79, at 68–69, 74.

118. *Ozone Hole: How We Saved the Planet* (PBS television broadcast Apr. 10, 2019), available at <https://www.pbs.org/video/ozone-hole-how-we-saved-the-planet-ttwe2l/> [<https://perma.cc/4UEN-D2MK>].

119. *Id.*

120. *Exxon Valdez Oil Spill*, HISTORY (Aug. 21, 2018), <https://www.history.com/topics/1980s/exxon-valdez-oil-spill> [<https://perma.cc/6JYZ-9A59>].

121. 33 U.S.C. §§ 2701–61 (2012); *It Took More Than the Exxon Valdez Oil Spill to Pass the Historic Oil Pollution Act of 1990*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Aug. 18, 2015), <https://response.restoration.noaa.gov/oil-and-chemical-spills/significant-incidents/exxon-valdez-oil-spill/it-took-more-exxon-valdez-oil-s> [<https://perma.cc/4VVN-26JV>].

122. 46 U.S.C. § 3703a (2012).

123. *A Final Farewell to Oil Tankers with Single Hulls*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Dec. 11, 2014), <https://response.restoration.noaa.gov/about/media/final-farewell-oil-tankers-single-hulls.html> [<https://perma.cc/Q36L-C56M>].

President George H.W. Bush's signature environmental achievement was the enactment of the Clean Air Act Amendments of 1990.¹²⁴ These amendments mandated that leaded gasoline be banned as of January 1, 1996, which completed the transition to unleaded gasoline started during the Reagan Administration.¹²⁵ As discussed below, the EPA later played a key role in helping to persuade other countries to make the phaseout of leaded gasoline a global phenomenon. The 1990 Amendments added Title VI to the Act, which dramatically slashed emissions of sulfur dioxide through an emissions-trading program,¹²⁶ a concept that China later embraced in an effort to control its carbon emissions.¹²⁷

The most significant development in global environmental law that occurred during the George H.W. Bush Administration was the U.N.'s 1992 Rio Earth Summit. This is widely considered to have been the most successful of the five global environmental summits the U.N. has hosted during the last half century.¹²⁸ A total of 172 governments participated, and 108 of their leaders attended, making it the largest gathering of world leaders in history.¹²⁹ President Bush appointed EPA Administrator William Reilly to lead the U.S. delegation.¹³⁰ More than 2,400 NGOs attended the conference, and 17,000 more people attended a simultaneous "Global Forum."¹³¹

The most significant development at the conference was the adoption of the U.N. Framework Convention on Climate Change

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124. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, §§ 101-11, 104 Stat. 2399 (1990).
125. *Id.* § 220. Matthew Yglesias, *Lead*, THE ATLANTIC (July 9, 2007), <https://www.theatlantic.com/politics/archive/2007/07/lead/43094/> [<https://perma.cc/Z7N5-UNQB>].
126. Clean Air Act Amendments of 1990 § 403.
127. Jeff Johnson, *China Creates World's Largest Carbon Trading Program*, CHEM. & ENG'G NEWS (Dec. 21, 2017), <https://cen.acs.org/articles/95/web/2017/12/China-creates-worlds-largest-carbon.html> [<https://perma.cc/H4VP-BWLU>].
128. *See Earth Summit in Rio de Janeiro*, ENV'T & SOC'Y, <http://www.environmentandsociety.org/tools/keywords/earth-summit-rio-de-janeiro> [<https://perma.cc/8NAD-MV2Z>] (last visited June 21, 2020).
129. Roger Martella & Kim Smaczniak, *Introduction to Rio + 20: A Reflection on Progress Since the First Earth Summit and the Opportunities that Lie Ahead*, 12 SUSTAINABLE DEV. L. & POL'Y 4, 4 (2012).
130. *William K. Reilly*, WORLD WILDLIFE FUND, <https://www.worldwildlife.org/leaders/william-k-reilly> [<https://perma.cc/M9D3-39AG>] (last visited June 21, 2020).
131. Mary Jo Larson, *Low-Power Contributions in Multilateral Negotiations: A Framework Analysis*, 19 NEGOT. J. 133, 146 (2003); *The '92 Global Forum, Brazil, 1-12 June 1992*, UNITED NATIONS, <https://www.unmultimedia.org/s/photo/detail/281/0281388.html> [<https://perma.cc/UPY4-MQ7W>] (last visited June 21, 2020).

(UNFCCC), the first global treaty to address this problem.¹³² The goal of the U.S. delegation was to ensure that the UNFCCC did not impose any obligations on developed countries to limit their emissions of greenhouse gases.¹³³ The United States succeeded in achieving this goal, and the UNFCCC, like the Vienna Convention, instead set up a process for negotiating such limits.¹³⁴ Protests greeted President Bush when he participated in the conference,¹³⁵ but he signed the UNFCCC and promptly submitted it to the U.S. Senate for ratification.¹³⁶ In October 1992, the Senate ratified the treaty without a dissenting vote, the last time the Senate ratified an environmental treaty.¹³⁷

EPA Administrator William Reilly continually battled conservatives within the Bush Administration,¹³⁸ most notably Vice President Dan Quayle and his Council on Competitiveness, which claimed the right to vet and veto EPA regulations.¹³⁹ Reilly later claimed that Quayle had persuaded Bush not to sign the Convention on Biodiversity, which first was opened to signatures at the Rio Earth Summit, by mobilizing conservatives and the biotech industry to oppose it after leaking a memo Reilly had sent to Bush.¹⁴⁰

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132. United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107.
133. Shardul Agrawala & Steinar Andresen, *Indispensability and Indefensibility? The United States in the Climate Treaty Negotiations*, 5 GLOBAL GOVERNANCE 457, 460 (1999).
134. *Id.* at 461.
135. James Brooke, *The Earth Summit: U.S. Delegation in Rio Strained and Divided Over Policy*, N.Y. TIMES (June 12, 1992), <https://www.nytimes.com/1992/06/12/world/the-earth-summit-us-delegation-in-rio-strained-and-divided-over-policy.html> [https://perma.cc/5NCH-V4HT].
136. Agrawala & Andresen, *supra* note 133, at 461.
137. *Id.*; see also David Kaye, *Stealth Multilateralism: U.S. Foreign Policy Without Treaties—or the Senate*, 92 FOREIGN AFF. 113, 121–122 (2013) (discussing how U.S. international climate policy is made without Senate ratification).
138. *William K. Reilly: Oral History Interview*, EPA (July 26, 1993), <https://www.archive.epa.gov/epa/aboutepa/william-k-reilly-oral-history-interview.html> [https://perma.cc/J89H-Y4WS].
139. *Id.*; Philip J. Hiltz, *At Heart of Debate on Quayle Council: Who Controls Federal Regulations?*, N.Y. TIMES (Dec. 16, 1991), <https://www.nytimes.com/1991/12/16/us/at-heart-of-debate-on-quayle-council-who-controls-federal-regulations.html> [https://perma.cc/MJW6-JMVE].
140. *William K. Reilly: Oral History Interview*, *supra* note 138; DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 958 (1st ed. 1998).

G. The Clinton Administration, NAFTA, Lead Phaseout, and the Kyoto Protocol

When the Clinton Administration assumed office in January 1993, the new Vice President, Al Gore, had stellar environmental credentials,¹⁴¹ but the new President did not. As governor of Arkansas, Clinton had not been a good steward of the environment: Arkansas was one of only two states that then had not even qualified for delegated authority to issue permits under the federal Clean Water Act.¹⁴² One of Clinton's first initiatives was to announce that he planned to eliminate the CEQ to help fulfill a campaign pledge to reduce the size of the White House's staff.¹⁴³

During the 1992 presidential campaign, then-Governor Bill Clinton had endorsed the North American Free Trade Agreement (NAFTA),¹⁴⁴ which the Bush administration had negotiated, with the caveat that side agreements be added to ensure that NAFTA would not erode environmental or labor standards.¹⁴⁵ On August 13, 1993, negotiators from Canada, Mexico, and the United States reached an agreement on environmental and labor side agreements.¹⁴⁶ The environmental side agreement, the North American Agreement on Environmental Co-operation (NAAEC),¹⁴⁷ required each country to "effectively enforce its environmental laws and regulations through appropriate government

141. See generally AL GORE, *EARTH IN THE BALANCE: ECOLOGY AND THE HUMAN SPIRIT* (1st ed. 1992); Jessica Aldred & Lauren Goodchild, *The Life and Career of Al Gore*, *THE GUARDIAN* (Oct. 12, 2007, 7:06 AM), <https://www.theguardian.com/environment/2007/oct/12/climatechange> 1 [<https://perma.cc/Y67W-M97V>].

142. Keith Schneider, *The 1992 Campaign: Candidate's Record; Arkansas Water Pollution Looms as a Campaign Issue*, *N.Y. TIMES* (Apr. 21, 1992), <https://www.nytimes.com/1992/04/21/us/1992-campaign-candidate-s-record-arkansas-water-pollution-looms-campaign-issue.html> [<https://perma.cc/5R8V-KYEW>]; Emily Walkenhorst, *After 42 Years, Arkansas Has Not Carried Out Plan To Protect State Waters from Degradation*, *ARK. DEMOCRAT GAZETTE* (Sept. 10, 2017 4:30 AM), <https://www.arkansasonline.com/news/2017/sep/10/after-42-years-state-waters-plan-unfini/> [<https://perma.cc/8CBA-UHVK>].

143. John Hart, *President Clinton and the Politics of Symbolism: Cutting the White House Staff*, 110 *POL. SCI. Q.* 385, 385, 396 (1995).

144. Gwen Ifill, *The 1992 Campaign: The Democrats; with Reservations, Clinton Endorses Free-Trade Pact*, *N.Y. TIMES* (Oct. 5, 1992), <https://www.nytimes.com/1992/10/05/us/1992-campaign-democrats-with-reservations-clinton-endorses-free-trade-pact.html> [<https://perma.cc/373U-W3EP>].

145. WILLIAM J. CLINTON, *MY LIFE* 432 (2004).

146. *Id.* at 540.

147. Tseming Yang, *The Emerging Practice of Global Environmental Law*, 1 *TRANSNAT'L ENVTL. L.* 53, 62 (2012).

action.”¹⁴⁸ It created the Commission on Environmental Cooperation (CEC) to serve as a forum for discussing environmental matters covered by the side agreement.¹⁴⁹ This strengthened political support for approving NAFTA because it created a vehicle for environmentalists to file complaints about non-enforcement of environmental laws in Canada, the United States, or Mexico.

As mandated by the 1990 Clean Air Act Amendments, in January 1996, gasoline lead additives were prohibited.¹⁵⁰ EPA Administrator Carol Browner hailed this as “one of the greatest environmental achievements of all time,” noting that “[t]housands of tons of lead have been removed from the air, and blood levels of lead in our children are down 70[%.]”¹⁵¹ The Agency then actively supported efforts to convince other countries to follow suit. In March 1997, a symposium devoted to the elimination of lead in gasoline in China was held in Shanghai, co-sponsored by the EPA and China’s National Environmental Protection Agency.¹⁵² At the conclusion of the symposium, China announced that it would convert to 100% unleaded gasoline by 2000.¹⁵³ Representatives from China’s Ministry of Finance, Ministry of Public Security, and the State Planning Commission all endorsed the plan and offered their strong support.¹⁵⁴ Sinopec, China’s largest energy company, which produced nearly 80% of the gasoline in China,¹⁵⁵ announced that it was prepared to invest 15 billion RMB (then worth \$1.8 billion USD) to make the transition to all unleaded gasoline by 2000.¹⁵⁶

The phaseout of leaded gasoline soon became a global imperative. On February 20, 1996, member nations of the Organisation for Economic Co-operation and Development (OECD) signed a declaration establishing phaseout of leaded gasoline as a top action item for each

148. *Id.* at 57.

149. Norma S. Munguia Aldaraca, *The North American Agreement on Environmental Co-operation*, 3 REV. EUR. COMP. & INT’L ENVTL. L. 98, 101 (1994).

150. Prohibition on Gasoline Containing Lead or Lead Additives for Highway Use, 61 Fed. Reg. 3832, 3832 (Feb. 2, 1996) (codified at 40 C.F.R. pt. 80).

151. *EPA Takes Final Step in Phaseout of Leaded Gasoline*, EPA (Jan. 29, 1996), <https://www.archive.epa.gov/epa/aboutepa/epa-takes-final-step-phaseout-leaded-gasoline.html> [<https://perma.cc/E5QB-HQMM>].

152. OECD & UNEP, PHASING LEAD OUT OF GASOLINE: AN EXAMINATION OF POLICY APPROACHES IN DIFFERENT COUNTRIES 11 (1999), *available at* <https://www.oecd.org/chemicalsafety/risk-management/1937036.pdf> [<https://perma.cc/W8KC-HDVL>].

153. *Id.*

154. *Id.*

155. *Id.*

156. *Id.*

country.¹⁵⁷ By the time the E.U. banned the use of leaded gasoline at the pump in 2000, most E.U. nations already had banned it.¹⁵⁸ The EPA sought to facilitate the global phaseout by working with the U.S. Agency for International Development (USAID) to produce an “Implementer’s Guide to Phasing Out Lead in Gasoline.”¹⁵⁹ The guide provided “a checklist and guidance for government officials tasked with developing and implementing a lead phaseout policy . . . by assembling the data and resources these officials need to carry out their task.”¹⁶⁰ In 1999, USAID and the U.S.–Asia Environmental Partnership sponsored a workshop with Vietnam’s Ministry of Transport and the World Bank to discuss phasing out leaded gasoline and to learn from the experiences of other East Asian countries in their phaseout efforts.¹⁶¹ Vietnam’s phaseout of leaded gasoline was completed by July 2001, eleven years earlier than planned.¹⁶² Sri Lanka’s phaseout of gasoline lead additives resulted in a drop of lead levels in the air by 90%.¹⁶³

In December 1997, parties to the UNFCCC met in Kyoto, Japan, to adopt the first official limits on emissions of greenhouse gases.¹⁶⁴ In an effort to shape the U.S. negotiating position, the U.S. Senate on July 25, 1997 by a vote of 95–0 had adopted the Byrd–Hagel Resolution.¹⁶⁵ The resolution expressed “the sense of the Senate” that the United States should not agree to any “new commitments to limit or reduce greenhouse gas emissions . . . unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the

157. OECD, *Declaration on Risk Reduction for Lead*, at 3, OECD Legal Doc. 0285 (adopted Feb. 20, 1996), <https://www.legalinstruments.oecd.org/en/instruments/69> [<https://perma.cc/QTJ3-MN3Y>].

158. OECD & UNEP, *supra* note 152, at 4.

159. ENGINE, FUEL, & EMISSIONS ENG’G, INC. & HAGLER BAILLY SERVS., INC., EPA, IMPLEMENTER’S GUIDE TO PHASING OUT LEAD IN GASOLINE (1999), available at https://www.archive.epa.gov/international/air/web/pdf/epa_phase_out.pdf [<https://perma.cc/P6FF-R3HG>].

160. *Id.*

161. NORDIC COUNCIL OF MINISTERS, CHEMICALS AND DEVELOPMENT: HEALTH AND ECONOMIC BENEFITS OF SOUND CHEMICALS MANAGEMENT 97 (2008), available at https://www.nordic-ilibrary.org/environment/chemicals-and-development/benefits-of-sound-chemicals-management_9789289333764-5-en [<https://perma.cc/SH96-MKAH>].

162. *Id.*

163. *Id.*

164. *What Is the Kyoto Protocol?*, U.N.: CLIMATE CHANGE, https://unfccc.int/kyoto_protocol [<https://perma.cc/4KRY-QC7M>] (last visited June 21, 2020).

165. Steve Charnovitz, *Using Framework Statutes to Facilitate U.S. Treaty Making*, 98 AM. J. INT’L L. 696, 704 (2004).

same compliance period.”¹⁶⁶ In Kyoto, the U.S. delegation argued in vain for applying limits to all countries, but the developing world rejected that position as unfair since nearly all historic emissions that contributed to the climate problem had come from the developed world.¹⁶⁷ Under Secretary of State Stuart Eizenstat, the chief U.S. negotiator, argued for firm targets and flexible means to achieve them, such as the use of emissions trading.¹⁶⁸ When the negotiations began to flounder, Vice President Al Gore joined the talks, and an agreement was reached.¹⁶⁹ The Kyoto Protocol required developed countries, including the United States, to reduce their emissions from 2008 to 2012, on average, to 5% below 1990 levels.¹⁷⁰ But it did not in any way limit emissions from the developing world, including China and India, whose emissions were rapidly increasing. Thus, President Clinton never submitted the Kyoto Protocol to the Senate for ratification.¹⁷¹

H. The George W. Bush Administration Repudiates Climate Action

During the 2000 presidential campaign, Texas Governor George W. Bush was running against Vice President Al Gore, who had championed measures to combat climate change.¹⁷² In an effort to neutralize the issue, Governor Bush acknowledged that climate change was a serious problem. Although he did not accept the Kyoto Protocol, in an energy speech in Michigan on September 29, 2000, Bush stated that if he were elected President, he would seek new legislation from Congress to control emissions of greenhouse gasses (GHGs) from both old and new

166. S. Res. 98, 105th Cong. (1997) (enacted).

167. Kevin Sullivan, *Four U.S. Senators Lobbying in Kyoto*, WASH. POST (Dec. 3, 1997), [washingtonpost.com/wp-srv/inatl/longterm/climate/stories/clim120397.htm](https://www.washingtonpost.com/wp-srv/inatl/longterm/climate/stories/clim120397.htm) [<https://perma.cc/L2WV-V5DJ>].

168. *Implications of the Kyoto Protocol on Climate Change: Hearing Before the S. Comm. on Foreign Relations*, 105th Cong. 43–44 (1998) (statement of Stuart Eizenstat, Undersecretary of State).

169. Vice President Al Gore, Speech at Kyoto Climate Change Conference (Dec. 8, 1997), available at <https://clintonwhitehouse2.archives.gov/WH/EOP/OVP/speeches/kyotofin.html> [<https://perma.cc/X6VA-J22V>]; William K. Stevens, *Meeting Reaches Accord to Reduce Greenhouse Gases*, N.Y. TIMES (Dec. 11, 1997), <https://www.nytimes.com/1997/12/11/world/meeting-reaches-accord-to-reduce-greenhouse-gases.html> [<https://perma.cc/LKH8-YTJX>].

170. Kyoto Protocol to the United Nations Framework Convention on Climate Change, art. III, ¶ 1, Dec. 11, 1997, 2303 U.N.T.S. 162.

171. *See Clinton Hails Global Warming Pact*, CNN/TIME: ALLPOLITICS (Dec. 11, 1997), <https://www.cnn.com/ALLPOLITICS/1997/12/11/kyoto/> [<https://perma.cc/QY2G-LPLZ>].

172. Douglas Jehl, *On a Favorite Issue, Gore Finds Himself on a 2-Front Defense*, N.Y. TIMES (Nov. 3, 2000), <https://www.nytimes.com/2000/11/03/us/2000-campaign-environment-favorite-issue-gore-finds-himself-2-front-defense.html> [<https://perma.cc/6D3R-UEYV>].

power plants.¹⁷³ Bush appointed New Jersey Governor Christie Todd Whitman to be his EPA administrator, which drew praise from environmentalists.¹⁷⁴ Prior to leaving for a summit in Trieste with other national environment ministers, Whitman checked with White House Chief of Staff Andrew Card to confirm that the campaign pledge was still accurate.¹⁷⁵ With Card's reassurance, Whitman, in March 2001, told the environment ministers that the new Bush administration planned to set limits on U.S. emissions of GHGs,¹⁷⁶ then the largest source of global emissions.¹⁷⁷

On March 6, 2001, four Republican senators sent a letter to President Bush asking him to clarify his policy on climate change.¹⁷⁸ Vice President Dick Cheney had orchestrated the letter to create an opportunity for the President to disavow his campaign promise to regulate GHGs.¹⁷⁹ Cheney's staff drafted a brief reply emphasizing scientific uncertainties and international competitiveness as reasons for such a reversal.¹⁸⁰ Moments before Administrator Whitman, following her return from Trieste, was scheduled to meet with President Bush on the morning of March 13, Cheney persuaded the President to sign the

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173. Governor George W. Bush, Campaign Speech on Energy Issues in Saginaw, Michigan (Sept. 29, 2000), *available at* <https://www.c-span.org/video/?159527-1/energy-issues> [<https://perma.cc/B2FN-HUB8>].
174. David M. Halbfinger, *The 43rd President; Passion for Politics and the Outdoors—Christine Todd Whitman*, N.Y. TIMES (Dec. 23, 2000), <https://www.nytimes.com/2000/12/23/us/the-43rd-president-passion-for-politics-and-the-outdoors-christine-tood-whitman.html> [<https://perma.cc/FA48-SVHP>].
175. *Interviews: Christine Todd Whitman*, PBS: FRONTLINE (Apr. 24, 2007), <https://www.pbs.org/wgbh/pages/frontline/hotpolitics/interviews/whitman.html> [<https://perma.cc/RH9H-GYWM>].
176. *Climate Talks Secure U.S. Support*, CNN (Mar. 5, 2001, 9:28 AM), <https://www.cnn.com/2001/WORLD/europe/italy/03/04/environment.climate/index.html> [<https://perma.cc/PC6H-6QUM>].
177. *President Bush Discusses Global Climate Change*, THE WHITE HOUSE (June 11, 2001, 11:10 AM), <https://georgewbush-whitehouse.archives.gov/news/releases/2001/06/20010611-2.html> [<https://perma.cc/GBV7-VGS8>].
178. See Douglas Jehl & Andrew C. Revkin, *Bush, in Reversal, Won't Seek Cut in Emissions of Carbon Dioxide*, N.Y. TIMES (Mar. 14, 2001), <https://nytimes.com/2001/03/14/us/bush-in-reversal-won-t-look-cut-in-emissions-of-carbon-dioxide.html> [<https://perma.cc/E27C-95NZ>].
179. JAMES ROSEN, CHENEY ONE ON ONE: A CANDID CONVERSATION WITH AMERICA'S MOST CONTROVERSIAL STATESMAN 121–23 (2015); RICHARD J. LAZARUS, THE RULE OF FIVE: MAKING CLIMATE HISTORY AT THE SUPREME COURT (2020).
180. *Id.* at 121; BARTON GELLMAN, ANGLER: THE CHENEY VICE PRESIDENT 89 (2008).

letter; Cheney then personally delivered the reply to the senators.¹⁸¹ No one at the EPA or the State Department had seen the letter.¹⁸² Following a brief meeting with Bush, Whitman left the White House in shock.¹⁸³

Ten years after the 1992 Rio Earth Summit, the nations of the world met in Johannesburg, South Africa, for the 2002 World Summit on Sustainable Development (WSSD).¹⁸⁴ President George W. Bush declined to attend the Summit, but he named Secretary of State Colin Powell to lead the United States delegation.¹⁸⁵ Prior to the summit, U.S. officials had urged that it not be used to develop new treaties, but rather that it should focus on how to better implement existing commitments. Secretary of State Colin Powell made a brief appearance during the closing stages of the conference and was denounced by hecklers. No major treaties were signed, but the summit endorsed the importance of voluntary public-private partnerships.¹⁸⁶

One of the partnerships that grew out of the summit focused on phasing out gasoline additives on a global scale. During preparatory meetings for the WSSD, the Natural Resources Defense Council (NRDC) held a side event on “Cleaning Up the World’s Fuel Supply: Getting Lead Out of Gasoline and Sulfur Out of Diesel.”¹⁸⁷ At the event, held in late January 2002, NRDC noted that fifty countries had phased out leaded gasoline and 85% of all gasoline consumed worldwide was lead-free.¹⁸⁸ Jacob Scherr, Director of NRDC’s International Program, praised Colombia and Brazil for having banned leaded gasoline.¹⁸⁹ World Bank chief economist Magda Lovei highlighted success stories in Thailand, Vietnam, and El Salvador, while criticizing Venezuela for being slow and uncooperative in addressing the problem.¹⁹⁰

181. GELLMAN, *supra* note 180, at 89–90; *see also* Letter from President George W. Bush to Senators Hagel, Helms, Craig, and Roberts (Mar. 13, 2001), available at <https://georgewbush-whitehouse.archives.gov/news/releases/2001/03/20010314.html> [<https://perma.cc/5Z47-CZD2>].

182. GELLMAN, *supra* note 180, at 85.

183. *Id.* at 89–90.

184. SUSAN R. FLETCHER, CONG. RESEARCH SERV., RL31385, WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (WSSD): BACKGROUND AND SUMMARY 2 (2002).

185. *Id.*

186. Jutta Brunnée, *The United States and International Environmental Law: Living with an Elephant*, 15 EUR. J. INT’L L. 617, 634–36 (2004).

187. *The World Summit on Sustainable Development: Second Preparatory Committee (PrepCom-II)*, INT’L INST. FOR SUSTAINABLE DEV. (Feb. 6, 2002), enb.iisd.org/2002/pc2/6feb.html [<https://perma.cc/KJ9J-QZ8U>].

188. *Id.*

189. *Id.*

190. *Id.*

A Plan of Implementation adopted at the WSSD in August 2002 called for the World Bank to support a total phaseout of lead in gasoline.¹⁹¹ To this end, the WSSD established the Partnership for Clean Fuels and Vehicles (PCFV) as a public-private partnership dedicated to eliminating leaded gasoline.¹⁹² UNEP's Nairobi headquarters agreed to serve as the PCFV's clearinghouse.¹⁹³

On October 28, 2003, the Fuels and Vehicles Working Group of the International Petroleum Industry Environmental Conservation Association (IPIECA) endorsed the goal of working toward the worldwide elimination of lead as an additive in motor gasoline.¹⁹⁴ Noting that "the developing world should benefit from modern fuels which are available now in most countries," the IPIECA stated that "the removal of lead is important to public welfare because it will allow the introduction of widely available vehicle catalytic exhaust technology to improve air quality."¹⁹⁵

By October 2011, UNEP and the PCFV announced that phaseout of leaded gasoline had been completed in 175 countries.¹⁹⁶ This has resulted in a 90% decline in levels of lead in human blood.¹⁹⁷ UNEP and the PCFV lauded a study by economists Peter Tsai and Thomas Hatfield, which estimated the global net benefits from the phaseout of leaded fuel.¹⁹⁸ The economists concluded that the best estimate is a global net benefit of \$2.45 trillion per year, or approximately 4.27% of global gross domestic product per year.¹⁹⁹

191. Report of World Summit on Sustainable Development, Plan of Implementation, ¶ 56, U.N. Doc. A/CONF.199/20 (Sept. 4, 2002).

192. EPA, PARTNERSHIP FOR CLEAN FUELS AND VEHICLES: EVALUATION OF THE DESIGN AND IMPLEMENTATION OF THE LEAD CAMPAIGN, at ES-1 (2011).

193. Peter Lehner, *Global Phase-out of Lead in Gasoline Succeeds: Major Victory for Kids' Health*, NAT. RES. DEF. COUNCIL (Oct. 27, 2011), www.nrdc.org/experts/peter-lehner/global-phase-out-lead-gasoline-succeeds-major-victory-kids-health [<https://perma.cc/HPQ9-XUS3>].

194. INT'L PETROLEUM INDUS. ENVTL. CONSERVATION ASS'N, GETTING THE LEAD OUT: DOWNSTREAM STRATEGIES AND RESOURCES FOR PHASING OUT LEADED GASOLINE 1-4 (2003).

195. *Id.* at 4.

196. Lehner, *supra* note 193.

197. *Phase-out of Leaded Petrol Brings Huge Health and Cost Benefits—UN-Backed Study*, U.N. NEWS (Oct. 27, 2011), <https://news.un.org/en/story/2011/10/393292-phase-out-leaded-petrol-brings-huge-health-and-cost-benefits-un-backed-study> [<https://perma.cc/7L9U-97H7>].

198. EPA, *supra* note 192, at 2-3 (citing Peter L. Tsai & Thomas H. Hatfield, *Global Benefits from the Phaseout of Leaded Fuel*, 74 J. ENVTL. HEALTH 8, 8 (2011)).

199. Tsai & Hatfield, *supra* note 198.

The Bush Administration's antipathy toward measures to control GHG emissions led it to commit a major strategic error that ultimately laid the legal groundwork for federal regulation. On April 10, 1998, the Clinton Administration's EPA General Counsel, Jonathan Z. Cannon, had authored a legal opinion finding that greenhouse gases are "air pollutants" that can be regulated under the existing Clean Air Act.²⁰⁰ In October 1999, his successor, Gary S. Guzy, reiterated that position when appearing before a congressional committee.²⁰¹ In January 2001, just before Bush took office, the Clinton EPA solicited public comment on a petition asking the EPA to use the Clean Air Act to regulate GHG emissions from motor vehicles.²⁰² The petition had been filed in 1999 by the International Center for Technology Assessment, a five-person NGO formed in the wake of Congress abolishing the government's Office of Technology Assessment.²⁰³

Eager to drive a stake through the heart of the notion that the Clean Air Act covered GHG emissions, the Bush EPA revoked Cannon's opinion.²⁰⁴ On September 8, 2003, the EPA entered an order denying the petition.²⁰⁵ This was a spectacular strategic mistake made without the support of EPA's career employees.²⁰⁶ EPA had no legal obligation to respond to the petition,²⁰⁷ but by doing so the Agency opened the courthouse doors to environmental interests who now had a federal agency action subject to judicial review. After the D.C. Circuit upheld the EPA's action,²⁰⁸ the Supreme Court, by a 5-4 vote, reversed and held that GHGs are air pollutants subject to regulation under the Clean Air Act²⁰⁹ and that the EPA's reasons for not doing so were

200. *See Is CO₂ a Pollutant and Does EPA Have the Power to Regulate It?: Joint Hearing Before the Subcomm. on Nat'l Econ. Growth, Nat. Res., & Regulatory Affairs of the H. Comm. on Gov't Reform and the Subcomm. on Energy & Env't of the H. Comm. on Sci.*, 106th Cong. 21-26 (1999).

201. *Id.* at 14-20 (testimony of Gary S. Guzy, Gen. Counsel, EPA).

202. Notice of Control of Emissions from New and In-use Highway Vehicles and Engines, 66 Fed. Reg. 7,486, 7,486 (Jan. 23, 2001).

203. *Id.*; *see also* Warren E. Leary, *Congress's Science Agency Prepares to Close Its Doors*, N.Y. TIMES, Sept. 24, 1995, at 26 (recounting the OTA's history).

204. Jonathan Z. Cannon, *The Significance of Massachusetts v. EPA*, 93 VA. L. REV. ONLINE 53, 53-54 (2007).

205. Control of Emissions from New Highway Vehicles and Engines, 68 Fed. Reg. 52,922, 52,922 (Sept. 8, 2003).

206. LAZARUS, *supra* note 179.

207. *See* Administrative Procedure Act, 5 U.S.C. § 553(e) (2012) (requiring agencies to give interested parties the right to petition, but omitting an obligation to respond to such petitions).

208. *Massachusetts v. EPA*, 415 F.3d. 50, 58-59 (D.C. Cir. 2005).

209. *Massachusetts v. EPA*, 549 U.S. 497, 501, 528 (2007).

arbitrary and capricious.²¹⁰ This decision provided the legal basis for the Obama Administration's subsequent regulation of GHG emissions.²¹¹

I. *The Obama Administration, Minamata, Copenhagen, and the Paris Agreement*

During his first week in office, President Barack Obama took bold steps to reverse the Bush Administration's eight years of inaction on climate change. He instructed the EPA to reverse Bush's disapproval of California's request to adopt air-emissions standards that were more stringent than the federal minimum,²¹² and he ordered the EPA and the National Highway Transportation Safety Administration (NHTSA) to consider adopting significantly more stringent fuel-economy standards.²¹³ The President also agreed to initiate negotiations on a global treaty to control mercury emissions, which helped persuade China and India to reverse their opposition.²¹⁴ These negotiations culminated in the signing of the Minamata Convention on Mercury in October 2013.²¹⁵ By February 2020, a total of 128 countries had signed the Minamata Convention, and 117 of them have ratified it.²¹⁶ The Convention entered into force on August 16, 2017.²¹⁷

President Obama challenged Congress to adopt new legislation authorizing a nationwide cap-and-trade program to control GHG emissions. He told Congress that if it did not enact legislation regulating GHG emissions, the EPA would use its authority under the Clean Air

210. *See id.* at 533–34 (asserting that the EPA's justifications were not based on “reasoned judgment” and had “nothing to do with whether greenhouse gas emissions contribute to climate change”).

211. *See* Devin Henry, *EPA Head: Anti-Greenhouse Gas Declaration Involved “Breach of Process”*, THE HILL (Dec. 7, 2017, 11:36 AM), <https://thehill.com/policy/energy-environment/363749-epa-chief-agencys-climate-finding-under-obama-was-a-short-shrifted> [<https://perma.cc/4B6C-4FQ9>].

212. Memorandum on the State of California Request for Waiver Under 42 U.S.C. 7543(b), the Clean Air Act, 2009 DAILY COMP. PRES. DOC. 25 (Jan. 26, 2009).

213. Memorandum on the Energy Independence and Security Act of 2007, 2009 DAILY COMP. PRES. DOC. 24 (Jan. 26, 2009).

214. Suzanne Goldenberg, *Breakthrough Deal to End Global Mercury Pollution*, THE GUARDIAN (Feb. 20, 2009, 12:33 PM) <https://www.theguardian.com/environment/2009/feb/20/deal-end-mercury-pollution> [<https://perma.cc/N7SG-LL92>].

215. UNEP, MINAMATA CONVENTION ON MERCURY: TEXT AND ANNEXES 9 (2019).

216. *Minamata Convention on Mercury: Parties and Signatories*, UNEP, <http://www.mercuryconvention.org/Countries/Parties/tabid/3428/language/en-US/Default.aspx> [<https://perma.cc/U3XJ-JWKZ>] (last visited June 21, 2020).

217. UNEP, *supra* note 215, at 10.

Act to regulate them.²¹⁸ A bill to create a national cap-and-trade system, the American Clean Energy and Security Act of 2009 (also known as the Waxman-Markey bill), passed the House of Representatives by a vote of 219-212 on June 26, 2009.²¹⁹ But it never was brought to a vote in the Senate.²²⁰ On December 7, 2009, the EPA found that GHG emissions endanger public health and welfare,²²¹ triggering an obligation to regulate them under the Clean Air Act.²²²

President Obama sought to engage Chinese leaders in regular high-level meetings to discuss economic and environmental issues of mutual concern. This was particularly important because China's emissions of GHGs had increased so rapidly that in 2007 it overtook the United States as the largest GHG emitter in the world.²²³ At the G-20 meeting in London on April 1, 2009, President Obama and Chinese President Hu Jintao announced the start of a new U.S.-China Strategic and Economic Dialogue,²²⁴ or the "G-2."²²⁵ This represented an upgraded version of the Senior Dialogue and Strategic Economic Dialogue initiated in 2006 by Hu Jintao and President George W. Bush. Top leaders of both countries had met twice a year, alternating between China and the United States; five meetings had occurred between December 2006 and December 2008.

On the day of the first meeting of the new U.S.-China Strategic and Economic Dialogue, Secretary of State Hillary Clinton and Treasury

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218. See Ryan Lizza, *As the World Burns*, NEW YORKER (Oct. 3, 2010), <https://www.newyorker.com/magazine/2010/10/11/as-the-world-burns> [<https://perma.cc/73ZL-H25E>] (describing partisan negotiations between the White House and legislators).
219. H.R. 2454, 111th Cong. (2009); 155 Cong. Rec. H7686 (June 26, 2009) (vote on H.R. 2454).
220. For a discussion of what happened to this proposed legislation in the Senate, see Lizza, *supra* note 218.
221. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. I).
222. 24 U.S.C. § 7521(a) (2012).
223. John Vidal & David Adam, *China Overtakes US as World's Biggest CO2 Emitter*, THE GUARDIAN (June 19, 2007, 1:23 PM), <https://www.theguardian.com/environment/2007/jun/19/china.usnews> [<https://perma.cc/65WL-RFTS>].
224. Dennis Wilder, *The U.S.-China Strategic and Economic Dialogue: Continuity and Change in Obama's China Policy*, BROOKINGS INST. (May 15, 2009), <https://www.brookings.edu/articles/the-u-s-china-strategic-and-economic-dialogue-continuity-and-change-in-obamas-china-policy/> [<https://perma.cc/D75D-SXGW>].
225. Richard C. Bush, *The United States and China: A G-2 in the Making?*, BROOKINGS INST. (Oct. 11, 2011), <https://www.brookings.edu/articles/the-united-states-and-china-a-g-2-in-the-making/> [<https://perma.cc/3S5B-845Q>].

Secretary Timothy Geithner noted that a “priority is to make progress on the interconnected issues of climate change, energy and the environment. Our two nations need to establish a true partnership to put both countries on a low-carbon pathway, simultaneously reducing greenhouse gas emissions while promoting economic recovery and sustainable development.”²²⁶ Clinton and Geithner emphasized the importance of China agreeing to “meaningful participation” in new measures to cap rising emissions of GHGs at the next meeting of the parties to the UNFCCC in December 2009 in Copenhagen.²²⁷

The July 2009 U.S.-China meeting included special separate sessions on climate change, clean energy, and the environment.²²⁸ The U.S. officials at the meeting included EPA Administrator Lisa Jackson and former EPA Administrator Carol Browner, who was then Director of the White House’s Office of Energy and Climate Change Policy.²²⁹ China’s representatives include the National Development and Reform Commission’s Vice Minister Zhang Guobao, who spoke on energy issues, and Vice Minister Xie Zhenhua, former head of China’s State Environmental Protection Agency, who talked about China’s efforts to limit its carbon dioxide emissions.²³⁰

At the Copenhagen conference in December 2009, China refused to agree to cap its GHG emissions.²³¹ With the negotiations at an impasse, President Obama arrived and played a major role in convincing world leaders to shift to a new approach. He proposed what came to be known as the “Copenhagen Accord,” in which individual countries would volunteer how they planned to control their GHG emissions.²³²

226. Hillary Clinton & Timothy Geithner, *A New Strategic and Economic Dialogue*, WALL ST. J. (July 27, 2009, 9:34 AM), <https://www.wsj.com/articles/SB10001424052970204886304574308753825396372> [<https://perma.cc/9XNM-PHAW>].

227. *Id.*

228. *U.S.-China Relations: Maximizing the Effectiveness of the Strategic and Economic Dialogue: Hearing Before the Subcomm. on Asia, the Pacific and the Global Environment of the H. Comm. on Foreign Affairs*, 111th Cong. 11 (2009) (statement of David B. Shear, Deputy Assistant Sec’y, Bureau of East Asian and Pacific Affairs).

229. U.S. Dep’t of State, Briefing on the U.S.-China Strategic and Economic Dialogue (2009), available at <https://2009-2017.state.gov/r/pa/prs/ps/2009/july/126525.htm> [<https://perma.cc/GKU4-YEWW>].

230. *Id.*

231. Julia Hollingsworth, *Looking Back at How China’s Stance on Climate Change Shifted*, S. CHINA MORNING POST (June 2, 2017, 6:30 PM), <https://www.scmp.com/news/china/policies-politics/article/2096690/looking-back-how-chinas-stance-climate-change-shifted> [<https://perma.cc/UW9A-FJU7>].

232. Darren Samuelsohn, *Obama Negotiates ‘Copenhagen Accord’ with Senate Climate Fight in Mind*, N.Y. TIMES (Dec. 21, 2009), <https://archive.nytimes>

Although China refused to promise that it would cap its emissions, it adopted a “voluntary goal” to reduce the carbon intensity of its economy by 2020 to 40% below its 2005 levels.²³³ India announced an “aspirational target” to reduce the carbon intensity of its economy by 2020 to 20% percent below 2005 levels.²³⁴ While the conference “took notice” of the Copenhagen Accord without formally adopting it,²³⁵ the Accord marked a shift away from the top-down approach of the Kyoto Protocol to a new bottom-up strategy relying largely on voluntary commitments by each nation.²³⁶ This foreshadowed the approach ultimately adopted in the 2015 Paris Agreement.²³⁷

During the Obama administration, the EPA expanded its international outreach. As part of the U.S.-Asia Environmental Partnership, the EPA provided technical assistance to Vietnam and other governments in Southeast Asia on measures to improve regional air quality.²³⁸ EPA officials continued to participate in the Strategic and Economic Dialogue’s high-level meetings between Chinese and U.S. officials, with environmental issues prominent on the agenda.²³⁹ In June 2012, China protested when the U.S. Embassy in Beijing started a

.com/www.nytimes.com/cwire/2009/12/21/21climatewire-obama-negotiates-copenhagen-accord-with-senat-6121.html?scp=1&sq=copenhagen%2520accord&st=cse [https://perma.cc/9UPC-DDXW].

233. David Biello, *Majority of World’s Countries Miss Copenhagen Accord Deadline*, SCI. AM.: OBSERVATIONS (Feb. 1, 2010), <https://blogs.scientificamerican.com/observations/majority-of-worlds-countries-miss-copenhagen-accord-deadline/> [https://perma.cc/U3JG-WSH9].

234. *Id.*

235. Tracy D. Hester, *Remaking the World to Save It: Applying U.S. Environmental Laws to Climate Engineering Projects*, 38 ECOLOGY L.Q. 851, 853 n.2 (2011).

236. Alden Meyer, *The Copenhagen Accord: Not Everything We Wanted, But Something to Build On*, UNION OF CONCERNED SCIENTISTS (Dec. 23, 2009), <https://www.ucsusa.org/resources/copenhagen-accord> [https://perma.cc/FJ3K-4CBA]; *The Paris Agreement*, INT’L TAX REV. (Dec. 13, 2017), <https://www.internationaltaxreview.com/article/b1f7nbth0z3307/the-paris-agreement> [https://perma.cc/6BTF-3W2V]; Emma Graham-Harrison, *Paris Climate Deal: What Was Agreed and Does it Matter If US Withdraws?*, THE GUARDIAN (June 1, 2017), <https://www.theguardian.com/environment/2017/jun/01/paris-climate-deal-what-was-agreed-and-does-it-matter-if-us-withdraws> [https://perma.cc/J56R-3DHH].

237. Meyer, *supra* note 236; *The Paris Agreement*, *supra* note 236.

238. *See EPA Collaboration with Vietnam*, EPA, <https://www.epa.gov/international-cooperation/epa-collaboration-vietnam> [https://perma.cc/69A3-KGJA] (last updated Feb. 20, 2020).

239. U.S. Dep’t of State, Report of the U.S.-China Climate Change Working Group to the 8th Round of the Strategic and Economic Dialogue (2016), available at <https://2009-2017.state.gov/e/oes/rls/rpts/258282.htm> [https://perma.cc/4DAF-ERGE].

Twitter feed of an air-quality monitor with hourly reports of levels of small particulate (PM2.5).²⁴⁰ The United States refused to stop reporting the data, which showed much higher levels of pollution than the Chinese government had been reporting. The reaction of the Chinese public ultimately forced China to set new regulations to limit levels of PM2.5.²⁴¹ EPA later honored the embassy staffer who came up with the idea for the Twitter feed.

In June 2012, the U.N. Conference on Sustainable Development, also known as the Rio+20 Conference, was held in Rio de Janeiro.²⁴² The U.S. delegation was led by Secretary of State Hilary Clinton with EPA Administrator Lisa Jackson serving as alternate head of the delegation, and Todd Stern, Special Envoy on Climate Change, serving as chief negotiator.²⁴³ Nancy Sutley, Chair of the White House Council on Environmental Quality, was part of the U.S. delegation, which included technical experts from the EPA.²⁴⁴ The Conference launched a process to develop sustainable development goals for the period from 2016–2030, building upon the Millennium Development Goals that were expiring at the end of 2015.²⁴⁵

In June 2013, the Obama White House released a comprehensive climate action plan vowing to reclaim international leadership on climate issues. The plan pledged to galvanize “international action to significantly reduce emissions . . . , prepare for climate impacts, and drive progress through the international negotiations.”²⁴⁶ Specifically, it

240. Keith Bradsher, *China Asks Other Nations Not to Release Its Air Data*, N.Y. TIMES (June 5, 2012), <https://www.nytimes.com/2012/06/06/world/asia/china-asks-embassies-to-stop-measuring-air-pollution.html> [<https://perma.cc/5S2L-4AXD>].

241. *Beijing Air Quality to Be Better Monitored*, THE GUARDIAN (Oct. 8, 2012), <https://www.theguardian.com/environment/2012/oct/08/beijing-air-quality-monitor?INTCMP=SRCH> [<https://perma.cc/STW7-FUVW>]; Edward Wong, *China's Plan to Curb Air Pollution Sets Limits on Coal Use And Vehicles*, N.Y. TIMES (Sept. 12, 2013), <https://www.nytimes.com/2013/09/13/world/asia/china-releases-plan-to-reduce-air-pollution.html> [<https://perma.cc/9PPL-X7WB>].

242. *United Nations Conference on Sustainable Development, Rio+20*, UNITED NATIONS, <https://sustainabledevelopment.un.org/rio20> [<https://perma.cc/9LCU-5LKy>] (last visited June 21, 2020).

243. Press Release, U.S. Dep't of State, Undersecretary of State for Public Diplomacy and Public Affairs, Secretary of State Hillary Clinton to Head U.S. Delegation to the UN Conference on Sustainable Development (June 12, 2012), available at <https://2009-2017.state.gov/r/pa/prs/ps/2012/06/192201.htm> [<https://perma.cc/56YT-9R49>].

244. *Id.*

245. UNITED NATIONS, THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2 (2016).

246. EXEC. OFFICE OF THE PRESIDENT, THE PRESIDENT'S CLIMATE ACTION PLAN 5 (2013).

vowed to “expand major new and existing international [climate] initiatives, including bilateral initiatives with China, India, and other major emitting countries.”²⁴⁷ It also promised to stop U.S. government support for financing of new coal-fired power plants in other countries unless the plants used the most efficient technology available such as carbon capture and sequestration.²⁴⁸

Part of President Obama’s climate action plan was to persuade the global community to use the Montreal Protocol to phase out hydrofluorocarbons (HFCs), ozone-depleting substances that also are potent greenhouse gases.²⁴⁹ During President Obama’s first meeting with Chinese President Xi Jinping in California in June 2013, the two leaders agreed to such a plan.²⁵⁰ In November 2015, EPA Administrator Gina McCarthy led the U.S. delegation to the 27th Meeting of the Parties to the Montreal Protocol (MOP-27) in Dubai.²⁵¹ At MOP-27 the Dubai Pathway was adopted, initiating negotiations to phase down the production and use of HFCs.²⁵² These negotiations culminated in October 2016 with the adoption of the Kigali Amendment to the Montreal Protocol,²⁵³ which entered into force on January 1, 2019.²⁵⁴

China and the United States ultimately adopted a joint strategy to control their emissions of GHGs. After months of secret negotiations, the United States and China stunned the global community on

247. *Fact Sheet: President Obama’s Climate Action Plan*, THE WHITE HOUSE (June 25, 2013), <https://obamawhitehouse.archives.gov/the-press-office/2013/06/25/fact-sheet-president-obama-s-climate-action-plan> [<https://perma.cc/MQ6S-3EVM>].

248. EXEC. OFFICE OF THE PRESIDENT, *supra* note 246, at 20.

249. *Id.* at 17.

250. Steven Mufson, *President Obama and Chinese President Xi Jinping Agree to Wind Down Production and Use of Hydrofluorocarbons, or HFCs*, WASH. POST (June 8, 2013), <https://www.washingtonpost.com/business/economy/president-obama-and-chinese-president-xi-jinping-agree-to-wind-down-production-and-use-of-hydrofluorocarbons-or-hfcs/2013/06/08/92e4d79e-d08f-11e2-8845-d970ccb04497story.html> [<https://perma.cc/X464-7RCX>].

251. EPA, News Release, EPA Administrator Events at COP21 in Paris, Dec. 3, 2015, <https://archive.epa.gov/epa/newsreleases/epa-administrator-events-cop21-paris.html> [<https://perma.cc/6M4Z-Y7DU>].

252. DANIEL BODANSKY ET AL., INTERNATIONAL CLIMATE CHANGE LAW 274–75 (2017).

253. See Xiaopu Sun & Tad Ferris, *The Kigali Amendment’s and China’s Critical Roles in Evolving the Montreal Protocol*, 33 NAT. RESOURCES & ENV’T 30, 32 (2018).

254. *The Montreal Protocol Evolves to Fight Climate Change*, UNITED NATIONS INDUS. DEV. ORG., <https://www.unido.org/our-focus-safeguarding-environment/implementation-multilateral-environment-agreements/montreal-protocol-evolves-fight-climate-change> [<https://perma.cc/KS42-349U>] (last visited June 21, 2020).

November 11, 2014, by releasing the U.S.-China Joint Announcement on Climate Change.²⁵⁵ For the first time, China agreed to stop the rise of its GHG emissions by 2030 if not earlier;²⁵⁶ the United States set a new target to reduce its GHG emissions by 2025 to 26–28% below 2005 levels.²⁵⁷ This agreement played a major role in the successful conclusion of the 2015 Paris Conference of the Parties (COP-21) where the Paris Climate Agreement was endorsed by every country in the world except for Syria and Nicaragua.²⁵⁸

J. The Trump EPA and the Paris Agreement

During the 2016 presidential campaign, candidate Donald Trump promised to “abolish [the] EPA” and to “cancel the Paris Agreement.”²⁵⁹ In November 2012, Trump tweeted that “[t]he concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.”²⁶⁰

After winning the 2016 presidential election, Trump appointed Myron Ebell, a fierce opponent of the EPA, to head up the Agency’s transition team.²⁶¹ He nominated Oklahoma Attorney General Scott Pruitt, who had sued the EPA more than a dozen times, to be EPA Administrator.²⁶² On Trump’s first day in office, the White House

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255. Mark Landler, *U.S. and China Reach Climate Accord After Months of Talks*, N.Y. TIMES (Nov. 11, 2014), <https://www.nytimes.com/2014/11/12/world/asia/china-us-xi-obama-apec.html> [<https://perma.cc/GWP3-L7KP>].
256. *Id.*
257. *U.S.-China Joint Announcement on Climate Change*, THE WHITE HOUSE (Nov. 11, 2014), <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change> [<https://perma.cc/8ZV7-AXHF>].
258. Rebecca Harrington & Skye Gould, *The US Will Join Syria and Nicaragua as the Only Nations that Aren’t Part of the Paris Agreement*, BUS. INSIDER (June 1, 2017, 5:18 PM), <https://www.businessinsider.com/195-countries-that-signed-paris-climate-agreement-accord-deal-2017-5> [<https://perma.cc/Z56K-TWMA>].
259. Robert V. Percival, *Environmental Law in the Trump Administration*, 4 EMORY CORP. GOVERNANCE & ACCOUNTABILITY REV. 225, 225 (2017).
260. Donald J. Trump (@realDonaldTrump), TWITTER, (Nov. 6, 2012, 2:15 PM), <https://twitter.com/realdonaldtrump/status/265895292191248385?lang=en> [<https://perma.cc/FH7W-PZ7V>].
261. Priyanka Boghani, *Meet Myron Ebell, the Climate Contrarian Leading Trump’s EPA Transition*, PBS: FRONTLINE (Nov. 14, 2016), <https://www.pbs.org/wgbh/frontline/article/meet-myron-ebell-the-climate-contrarian-leading-trumps-epa-transition/> [<https://perma.cc/Z4K9-6SPV>].
262. Brady Dennis, *Scott Pruitt, Longtime Adversary of EPA, Confirmed to Lead the Agency*, WASH. POST (Feb. 17, 2017, 6:49 PM), <https://www>

website announced that President Obama's climate action plan would be eliminated as "harmful and unnecessary."²⁶³ The plan was formally repealed by President Trump in a March 2017 Executive Order.²⁶⁴ On June 1, 2017, President Trump hosted a ceremony in the White House Rose Garden where he announced that he intended to withdraw the United States from the Paris Agreement.²⁶⁵ Bob Woodward's book, *Fear in the White House*,²⁶⁶ reports that Trump's daughter, Ivanka, and his son-in-law, Jared Kushner, lobbied him not to withdraw from the Paris Agreement.²⁶⁷ But White House adviser Steve Bannon and EPA Administrator Scott Pruitt, who fiercely opposed the Paris Agreement, won the battle.²⁶⁸

The United States' withdrawal cannot become effective until November 4, 2020, the day after the 2020 presidential election.²⁶⁹ Subsequent to Trump's announcement, both Syria and Nicaragua ratified the Paris Agreement.²⁷⁰ As a result, the United States, which is now the second largest emitter of GHGs in the world,²⁷¹ is now the only

.washingtonpost.com/news/energy-environment/wp/2017/02/17/scott-pruitt-long-time-adversary-of-epa-confirmed-lead-the-agency/ [https://perma.cc/CVQ9-Z6ZQ].

263. Valerie Volcovici, *Trump to Target Obama's Climate Initiatives: White House Website*, REUTERS (Jan. 20, 2017 1:46 PM), <https://www.reuters.com/article/us-usa-trump-energy/trump-to-target-obamas-climate-initiatives-white-house-website-idUSKBN1542JT> [https://perma.cc/M3TH-9S7Z].

264. Exec. Order No. 13,783, 82 Fed. Reg. 16,093 (Mar. 31, 2017).

265. Remarks Announcing United States Withdrawal from the United Nations Framework Convention on Climate Change Paris Agreement, 2017 DAILY COMP. PRES. DOC. 373 (June 1, 2017).

266. BOB WOODWARD, *FEAR: TRUMP IN THE WHITE HOUSE* (2018).

267. *Id.* at 189–90.

268. *Id.* at 191, 194.

269. A party's withdrawal from the Paris Agreement "shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal." Conference of the Parties, Adoption of the Paris Agreement art. 28, Dec. 12, 2015, U.N. Doc. FCCC/CP/2015/L.9/Rev/1 (Dec. 12, 2015). The Trump administration officially notified the United Nations of its plan to withdraw from the Paris Agreement on November 4, 2019. Brady Dennis, *Trump Makes It Official: U.S. Will Withdraw from the Paris Climate Accord*, WASH. POST (Nov. 4, 2019, 7:17 PM), <https://www.washingtonpost.com/climate-environment/2019/11/04/trump-makes-it-official-us-will-withdraw-paris-climate-accord/> [https://perma.cc/A5KB-X9Q6].

270. Lisa Friedman, *Syria Joins Paris Climate Accord, Leaving Only U.S. Opposed*, N.Y. TIMES (Nov. 7, 2017), <https://www.nytimes.com/2017/11/07/climate/syria-joins-paris-agreement.html> [https://perma.cc/4NPP-8BTA].

271. *Global Greenhouse Gas Emissions Data*, EPA, <https://www.epa.gov/>

country in the world to reject the Paris Agreement.²⁷² Chinese officials have expressed disappointment in President Trump's decision, but they have reaffirmed that China is committed to meeting its commitments under the agreement.²⁷³ In fact, China may be on track to meet its Paris commitments several years early.²⁷⁴

A coalition of 10 states, 11 tribes, 289 cities and counties, 2,239 businesses and investment groups, and 353 colleges and universities calling itself "We Are Still In" has pledged to ignore the U.S. withdrawal and operate in a manner to meet the United States' commitment.²⁷⁵ A bipartisan group of governors from twenty-four states and Puerto Rico has joined the United States Climate Alliance, which is committed to reducing greenhouse emissions consistent with the goals of the Paris Agreement.²⁷⁶

The Trump administration renegotiated NAFTA, and the new US-Mexico-Canada Agreement (USMCA) includes a side agreement on Environmental Cooperation.²⁷⁷ The agreement makes no mention of climate change, but a side agreement continues the work of the

ghgemissions/global-greenhouse-gas-emissions-data#Country [https://perma.cc/2JD2-SR7V] (last updated Sept. 13, 2019).

272. Friedman, *supra* note 270.

273. *See China Accuses Rich Countries of "Backsliding" on Climate Promises*, S. CHINA MORNING POST (Dec. 14, 2018, 8:35 PM), <https://www.scmp.com/print/news/china/politics/article/2178096/china-accuses-rich-countries-backsliding-climate-promises> [https://perma.cc/9TJF-Z5XD]; *China, France Reaffirm Support of Paris Climate Agreement, Call It "Irreversible"*, REUTERS (Nov. 6, 2019, 1:38 AM), <https://www.reuters.com/article/us-china-france-paris-agreement/china-france-reaffirm-support-of-paris-climate-agreement-call-it-irreversible-idUSKBN1XG0QJ> [https://perma.cc/83WJ-M8EM].

274. Adam Vaughn, *China Is on Track to Meet Its Climate Change Goals Nine Years Early*, NEW SCIENTIST (July 26, 2019), <https://www.newscientist.com/article/2211366-china-is-on-track-to-meet-its-climate-change-goals-nine-years-early/> [https://perma.cc/XKH6-QHUF].

275. *Who's In*, WE ARE STILL IN, <https://www.wearestillin.com/signatories> [https://perma.cc/JR7W-GZB7] (last visited June 22, 2020); *"We Are Still In" Declaration*, WE ARE STILL IN, <https://www.wearestillin.com/we-are-still-declaration> [https://perma.cc/BW3L-LS3U] (last visited June 22, 2020).

276. *Governors*, U.S. CLIMATE ALLIANCE, <http://www.usclimatealliance.org/governors-1> [https://perma.cc/WB3F-FSLP] (last visited June 22, 2020); *Alliance Principles*, U.S. CLIMATE ALLIANCE, <http://www.usclimatealliance.org/alliance-principles> [https://perma.cc/XV2U-C9GK] (last visited June 22, 2020).

277. *See 2018 Agreement on Environmental Cooperation among the Governments of the United States of America, the United Mexican States, and Canada*, EPA, <https://www.epa.gov/international-cooperation/2018-agreement-environmental-cooperation-among-governments-united-states> [https://perma.cc/TGP2-6YHA] (last updated Jan. 15, 2020).

Commission on Environmental Cooperation.²⁷⁸ After being passed by both Houses of Congress, legislation approving the USMCA was signed by President Trump on January 29, 2020.²⁷⁹

II. THE ROLE OF THE EPA IN THE DEVELOPMENT OF GLOBAL ENVIRONMENTAL LAW

As the foregoing history demonstrates, during its first half century of operation the EPA has played a significant role in the development of global environmental law. Its role has been highly dependent upon the policies of the President and the U.S. Department of State, both of whom are primarily responsible for conducting international relations. But the high regard that other nations hold for the EPA's experience and technical expertise has afforded the Agency enormous global influence.

The importance the EPA has placed on international activities is reflected in the fact that, from the very beginning, the Agency had an Office of International Affairs. As the development of international environmental law increased in importance, the Agency's Office of General Counsel informally created an International Activities Division in 1989,²⁸⁰ and launched it formally in 1991 during preparations for the 1992 Rio Earth Summit.²⁸¹ This division consisted of an Associate General Counsel, a Deputy Associate General Counsel, and six staff attorneys.²⁸² In 2008, the Office of General Counsel's Environmental Law Office was merged into the Agency's Cross-Cutting Issues Law Office, headed by an Associate General Counsel.²⁸³ This office includes the International Environmental Law Practice Group (IELPG), which is staffed by four attorneys and an Assistant General Counsel.²⁸⁴ These lawyers work closely with the EPA's Office of International and Tribal Affairs (OITA), which coordinates international work within the EPA.²⁸⁵

The OITA includes three divisions. First, the Office of Regional and Bilateral Affairs is the EPA's primary point of contact with

278. Kyla Tienhaara, *NAFTA 2.0: What Are the Implications for Environmental Governance?*, EARTH SYS. GOVERNANCE, 2019, at 2, available at <https://www.sciencedirect.com/science/article/pii/S2589811619300035> [<https://perma.cc/RZF9-4C72>].

279. United States–Mexico–Canada Agreement Implementation Act, Pub. L. No. 116-113, 134 Stat. 11 (2020).

280. Yang, *supra* note 147, at 60.

281. *Id.*

282. *Id.*

283. *Id.*

284. *Id.*

285. *Id.* at 61.

governmental officials and environmental experts in countries that the EPA deems “priority regions” for environmental protection.²⁸⁶ The EPA has established bilateral cooperative programs with countries all over the world to share its expertise while building support for the EPA’s global environmental priorities.²⁸⁷ In the Asia-Pacific region, the EPA has such programs with Australia, China, Taiwan, Hong Kong, Japan, South Korea, Singapore, Vietnam, and the Pacific Islands.²⁸⁸ For example, the EPA assists China’s Ministry of Ecology and Environment (MEE) with the development of environmental protection laws based on a shared memorandum of understanding that focuses on six priorities, including improving air quality, reducing water pollution, and improving environmental enforcement and compliance.²⁸⁹ The EPA has assisted Vietnam’s Ministry of Natural Resources and Environment on topics such as how to conduct environmental impact assessments and how to improve enforcement of regulations.²⁹⁰

Similar educational relationships exist in Latin America, the Middle East, and Sub-Saharan Africa, in countries whose governments have not historically prioritized or enforced environmental regulation. In bilateral relationships in these regions, the EPA seems to take a mentorship role. In Latin America, the EPA participates in the Latin American Network for Environmental Enforcement and Compliance and evaluates the environmental impacts of free trade agreements.²⁹¹ In the Middle East, the EPA collaborates with Morocco under the auspices of the US-Morocco Free Trade Agreement,²⁹² and in Israel on waste-site cleanup, water-security initiatives, and lead-paint remediation programs.²⁹³

286. *About the Office of International and Tribal Affairs (OITA)*, EPA, <https://www.epa.gov/aboutepa/about-office-international-and-tribal-affairs-oita> [<https://perma.cc/A5CR-W6F8>] (last updated June 3, 2020).

287. *Where EPA Works Around the World*, EPA, <https://www.epa.gov/international-cooperation/where-epa-works-around-world> [<https://perma.cc/LRY6-447Q>] (last updated Feb. 20, 2020).

288. *See id.*

289. *EPA Collaboration with China*, EPA, <https://www.epa.gov/international-cooperation/epa-collaboration-china> [<https://perma.cc/44KA-T84W>] (last updated Jan. 2, 2020).

290. *EPA Collaboration with Vietnam*, *supra* note 238.

291. *EPA Efforts in Latin America and the Caribbean*, EPA, <https://www.epa.gov/international-cooperation/epa-efforts-latin-america-and-caribbean> [<https://perma.cc/LL35-SL5F>] (last updated Jan. 2, 2020).

292. *EPA Collaboration with Morocco*, EPA, <https://www.epa.gov/international-cooperation/epa-collaboration-morocco> [<https://perma.cc/WDF3-6WA8>] (last updated Sept. 11, 2019).

293. *EPA Collaboration with Israel*, EPA, <https://www.epa.gov/international-cooperation/epa-collaboration-israel> [<https://perma.cc/P2Z4-K4R4>] (last updated Mar. 24, 2020).

In regions that developed environmental regulation concurrently with the United States, such as Canada and Europe, the EPA's bilateral programs are partnerships directed towards common goals, such as reducing vehicle emissions and managing chemical use.²⁹⁴ The EPA shares technical expertise with European countries by inviting visits to its National Vehicle and Fuel Emissions Laboratory, and the Agency cooperates with European agencies in conducting transboundary pollution studies.²⁹⁵ The EPA and European agencies also compare how to improve chemical regulation under the U.S. Toxic Substances Control Act²⁹⁶ and the E.U.'s REACH program.²⁹⁷ In North America, the EPA has agreements with Canada, like the Boundary Waters Treaty,²⁹⁸ and with Mexico, including the Border 2020 initiative,²⁹⁹ to address environmental and public-health priorities in the southern border region.³⁰⁰

Second, the EPA's Office of Global Affairs and Policy provides international policy expertise for multinational environmental issues, develops initiatives to tackle new environmental issues, and engages with international instruments (e.g. trade, finance, investment agreements) related to environmental issues. For example, the office serves as the EPA's liaison in the Global Mercury Partnership (a result of the Minamata Convention on Mercury).³⁰¹ The EPA also works with the International E-Waste Management Network to share ideas for managing the growing problem of electronic waste around the world.³⁰²

294. *EPA Collaboration with Europe*, EPA, <https://www.epa.gov/international-cooperation/epa-collaboration-europe> [<https://perma.cc/K4SS-NMDA>] (last updated Sept. 11, 2019).

295. *Id.*

296. Toxic Substances Control Act, 15 U.S.C. §§ 2601–29 (2012).

297. Registration, Evaluation, Authorisation and Restriction of Chemicals, 2006 O.J. (L 396) 1.

298. Boundary Waters Treaty of 1909, Gr. Brit.–U.S., Jan. 11, 1909, 36 Stat. 2448; *see also* *Boundary Waters Treaty of 1909*, 36 Stat 2448, T.S. No. 548, NAT'L OCEANIC AND ATMOSPHERIC ADMIN.: OFFICE OF GEN. COUNSEL, https://www.gc.noaa.gov/gcil_boundarywaterstreaty.html [<https://perma.cc/NTY2-BDY4>] (last visited June 22, 2020).

299. *See What is Border 2020?*, EPA, <https://www.epa.gov/border2020/what-border-2020> [<https://perma.cc/B84Y-EHZZ>] (last updated Oct. 24, 2016).

300. *EPA Collaboration with Mexico*, EPA, <https://www.epa.gov/international-cooperation/epa-collaboration-mexico> [<https://perma.cc/3D9S-X7U8>] (last updated Jan. 16, 2020).

301. *EPA Leadership in the Global Mercury Partnership*, EPA, <https://www.epa.gov/international-cooperation/epa-leadership-global-mercury-partnership> [<https://perma.cc/82XV-B2NP>] (last updated Feb. 5, 2020).

302. *Cleaning Up Electronic Waste (E-Waste)*, EPA, <https://www.epa.gov/international-cooperation/cleaning-electronic-waste-e-waste> [<https://perma.cc/8YTW-6GT6>] (last updated Dec. 3, 2019).

The Office of Global Affairs and Policy is where the rest of the EPA's involvement in international environmental treaties takes place, such as the Partnership for Clean Fuels and Vehicles,³⁰³ of which the EPA was a founding member, and the Global Alliance to Eliminate Lead in Paint.³⁰⁴ The EPA is also involved in a number of U.N. environment programs, such as the Regional Seas Programme,³⁰⁵ the Caribbean Environment Program,³⁰⁶ and the Global Partnership on Marine Litter.³⁰⁷ The EPA's involvement in the latter partnership included providing guidance to other countries based on its trash-free waters program, an example of the Agency providing programmatic expertise to foreign governments.³⁰⁸

The Office of Global Affairs and Policy is also responsible for the EPA's involvement in international trade and finance. The EPA has worked with other domestic governmental agencies to develop robust environmental provisions of proposed free-trade agreements, such as the Central America-Dominican Republic Free Trade Agreement,³⁰⁹ the US-Australia Free Trade Agreement,³¹⁰ and others.³¹¹ It also shapes environmental criteria for the U.S. government's international finance and investment decisions, working with the Treasury Department to

303. *About the Office of International and Tribal Affairs (OITA)*, *supra* note 286; *Promoting Cleaner Fuels and Vehicles Worldwide*, EPA, <https://www.epa.gov/international-cooperation/promoting-cleaner-fuels-and-vehicles-worldwide> [<https://perma.cc/LRD2-ZEBU>] (last updated Dec. 3, 2019).

304. *EPA Leadership in the Lead Paint Alliance*, EPA, <https://www.epa.gov/international-cooperation/epa-leadership-lead-paint-alliance> [<https://perma.cc/Y8UP-KFXB>] (last updated Sept. 26, 2019).

305. *EPA's Role in the United Nations Environment Programme (UNEP)*, EPA, <https://www.epa.gov/international-cooperation/epas-role-united-nations-environment-programme-unesep> [<https://perma.cc/47JF-LHZ8>] (last updated July 11, 2019).

306. *Id.*

307. *Id.*

308. *Protecting the Marine Environment*, EPA, <https://www.epa.gov/international-cooperation/protecting-marine-environment> [<https://perma.cc/BNB2-JSL5>] (last updated July 11, 2019).

309. *EPA's Role in International Trade*, EPA, <https://www.epa.gov/international-cooperation/epas-role-international-trade#epa> [<https://perma.cc/UD57-2GFW>] (last updated May 12, 2020); *CAFTA-DR (Dominican Republic-Central America FTA)*, OFFICE OF THE U.S. TRADE REP., <https://ustr.gov/trade-agreements/free-trade-agreements/cafta-dr-dominican-republic-central-america-fta> [<https://perma.cc/7KDV-BTBH>] (last visited June 22, 2020).

310. *EPA's Role in International Trade*, *supra* note 309; *Free Trade Agreements Australia*, OFFICE OF THE U.S. TRADE REP., <https://ustr.gov/trade-agreements/free-trade-agreements/australian-fta> [<https://perma.cc/K76Y-CWJL>] (last visited June 22, 2020).

311. *EPA's Role in International Trade*, *supra* note 309.

review the environmental impacts of investments by multilateral development banks (e.g., the World Bank).³¹²

Finally, the EPA's Office of Management and International Services manages the Agency's International Visitors Program for officials interested in learning about its programs, as well as grants and cooperative agreements.³¹³ The visitors program is a key component of the EPA's mentorship role on the global stage, as it allows international experts to learn from its successes in environmental regulation. In October 2013, a delegation from the Bureau of Environmental Supervision of China's then-Ministry of Environmental Protection was in Washington, D.C. to visit the EPA's offices, only to discover that the U.S. government had shut down due to failure of Congress to agree on a budget.³¹⁴ The Environmental Defense Fund stepped in and arranged for the visiting delegation to receive briefings from U.S. environmental law scholars. The government shutdown, which lasted from October 1st to the 17th,³¹⁵ forced the U.S. delegation that had traveled to Japan for the signing of the Minimata Convention to abruptly return home.³¹⁶

These three sub-offices of the OITA participate in what the EPA calls its "international cooperation" operations.³¹⁷ They are the formalized mechanisms for international involvement, spanning both global environmental law—collaborative sharing relationships with foreign governments developing their own environmental laws—and international environmental law—EPA involvement in the implementation of transnational treaties and partnerships.

The EPA's successful bilateral partnerships help illustrate how global environmental law is evolving through what one scholar early on

312. *EPA's Role in International Finance*, EPA, <https://www.epa.gov/international-cooperation/epas-role-international-finance> [<https://perma.cc/K2W4-RY6C>] (last updated Jan. 2, 2020).

313. *About the Office of International and Tribal Affairs (OITA)*, *supra* note 286.

314. See Jonathan Weisman & Jeremy W. Peters, *Government Shuts Down in Budget Impasse*, N.Y. TIMES (Sept. 30, 2013), <https://www.nytimes.com/2013/10/01/us/politics/congress-shutdown-debate.html> [<https://perma.cc/PHC6-8LWR>].

315. Dylan Matthews, *All 20 Previous Government Shutdowns, Explained*, VOX (Jan. 12, 2019, 12:32 PM), <https://www.vox.com/policy-and-politics/2018/1/19/16905584/government-shutdown-history-clinton-obama-explained#> [<https://perma.cc/XAD4-MT4P>].

316. *U.S. Backs Mercury Treaty But Government Shutdown Prevents Signing*, INSIDE EPA: RISK POL'Y REP., Oct. 15, 2013, at 5.

317. *About the Office of International and Tribal Affairs (OITA)*, *supra* note 286.

termed “transgovernmentalism.”³¹⁸ This type of exchange—information-sharing between independent governments—continues to thrive as countries borrow legal and regulatory innovations from one another. For example, in Europe the International Network for Environmental Compliance and Enforcement (INECE) works with the EPA and the Netherlands’ Ministry of Housing, Spatial Planning and Environment.³¹⁹ Poland and other European countries have sought similar technical assistance from the EPA.³²⁰ Similarly, during the initial NAFTA negotiations, the EPA conducted trainings in Mexico on the basics of environmental inspections, environmental-impact assessments, and using aerial surveillance techniques.³²¹ As a result of the EPA’s training, many Mexican environmental regulations have been revised to more closely model the EPA’s regulations.³²² Through its educational and collaborative partnerships with foreign governments EPA has used its expertise to improve the development of global environmental law.

In addition to its various formal involvements in international treaties and partnerships with other governments, the Agency maintains a less formal educational network to provide resources to other countries.³²³ For example, the EPA’s Public Participation Guide is designed to assist other governments in increasing meaningful public participation with the development of new environmental regulations.³²⁴ The Agency provides Environmental Impact Assessment technical review guidelines in English and Spanish,³²⁵ and an Environmental Solutions Toolkit, which is a guide to U.S. environmental technologies and service providers.³²⁶

318. Kal Raustiala, *The Architecture of International Cooperation: Trans-governmental Networks and the Future of International Law*, 43 VA. J. INT’L L. 1, 3–5 (2002).

319. *Id.* at 44.

320. *Id.*

321. *Id.* at 47–48.

322. *Id.* at 48.

323. *Resources for International Users*, EPA, <https://www.epa.gov/international-cooperation/resources-international-users> [<https://perma.cc/QV7M-H64S>] (last updated Mar. 31, 2020).

324. *Public Participation Guide*, EPA, <https://www.epa.gov/international-cooperation/public-participation-guide> [<https://perma.cc/ZS98-PYCW>] (last updated Feb. 22, 2018).

325. *Technical Review Guidelines for Environmental Impact Assessments in the Tourism, Energy and Mining Sectors*, EPA, <https://www.epa.gov/international-cooperation/technical-review-guidelines-environmental-impact-assessments-tourism> [<https://perma.cc/DB6X-GV4T>] (last updated Mar. 27, 2017).

326. *Export Promotion at EPA*, EPA, <https://www.epa.gov/international-cooperation/export-promotion-epa> [<https://perma.cc/F2NE-7AR2>] (last updated Feb. 28, 2019).

The EPA also works with international agencies and environmental departments to develop environmental management standards. For example, it assisted in the development of the International Standardization Organization (ISO) 14001 standard for environmental management systems.³²⁷ The EPA evaluated the usefulness of the proposed standard through a variety of pilot projects.³²⁸

The Agency has influenced the development of environmental law throughout the world through leading by example. EPA action made the United States one of the first countries in the world to ban DDT. The Agency was instrumental in bringing vehicle-emission regulation into the global mainstream, and its phaseout of gasoline lead additives inspired the rest of the world to follow suit. The Agency's Toxics Release Inventory has become a model for right-to-know and transparency programs worldwide.³²⁹

CONCLUSION

Looking back over the first half century of the EPA's history, several conclusions are apparent. First, from its very beginning, the EPA has played a major role in the development of global environmental law and policy, leading by example. As Russell Train has observed, during the 1970s, the United States "was recognized as the world leader in environmental matters" because "its domestic commitment to environmental progress . . . gave credibility to U.S. leadership in the international arena."³³⁰ Even when under assault by domestic critics, the EPA has commanded international respect because of its technical expertise and leadership experience.

Second, the EPA's influence has been enhanced by its working partnerships with other federal agencies and environmental ministries in other countries. In the United States, the President and the State Department have the primary responsibility for conducting foreign relations. Thus, the EPA's greatest global impact has occurred when it worked in tandem with the President and State Department to provide environmental expertise in support of the nation's foreign-policy goals.

327. *Frequent Questions About Environmental Management Systems*, EPA, <https://www.epa.gov/ems/frequent-questions-about-environmental-management-systems> [<https://perma.cc/E7UU-G85T>] (last updated Jan. 23, 2017).

328. *Id.*

329. TIMOTHY OLSON & DAVID MONSMA, ENERGY & ENV'T PROGRAM, ASPEN INST., 40 YEARS: EPA 40TH ANNIVERSARY (2010), available at https://assets.aspeninstitute.org/content/uploads/files/content/docs/pubs/EPS%20is%2040_Brochure_lowres_11.24.10.pdf?_ga=2.127867981.19884939.1592846576-1115275238.1592846576 [<https://perma.cc/DU2M-RWMC>].

330. Train, *supra* note 9, at 193.

Third, an important reason for the success of the EPA's global outreach has been long-time, bipartisan support for promoting a level global playing field featuring strong environmental controls in the rest of the world. As developing countries strengthen their environmental standards and improve enforcement, it becomes more difficult for dirty industries to find countries that are pollution havens.

Fourth, one of the hallmarks in the growth of global environmental law has been the emergence of public-private partnerships as NGOs increasingly work with government officials to develop and strengthen environmental protection measures. Public-private groups, such as the PCFV,³³¹ helped spread important and nearly universal policy innovations, such as the prohibition of lead additives in gasoline, which dramatically improved public health throughout the world.

The increasingly global nature of environmental problems has made it imperative that the EPA play a major role in international affairs. Even when under assault domestically, the Agency has commanded international respect because of its expertise and experience. The EPA now may be at a critical crossroads as the current administration again seeks to slash the Agency's budget and shrink the number of its employees. Review of the enormous impact the EPA has had during the last half century on the development of global environmental law suggests that any such action could have significant global consequences.

331. *Partnership for Clean Fuels and Vehicles*, UNEP, <https://www.unenvironment.org/explore-topics/transport/what-we-do/partnership-clean-fuels-and-vehicles> [<https://perma.cc/W2TK-7T3T>] (last visited June 22, 2020).