

**THE TOXIC DIVIDE: INTERNATIONAL WASTE DUMPING  
AND THE FIGHT FOR ENVIRONMENTAL EQUITY**

---

*Christine Paul\**

INTRODUCTION.....	121
I. HISTORY OF DOMESTIC ENVIRONMENTAL DISCRIMINATION .....	121
II. INTERNATIONAL ENVIRONMENTAL DISCRIMINATION .....	123
III. INTERNATIONAL INCIDENTS SPARK PUBLIC OUTCRY .....	125
IV. TOXIC WASTE OVERVIEW .....	126
V. RELEVANT TREATIES AND THEIR WEAKNESSES.....	128
A. The Basel Convention on the Control of Transboundary Movements .....	128
B. The Bamako Convention.....	130
C. The Stockholm Convention on Persistent Organic Pollutants .....	131
VI. LOOPHOLES AND ILLEGAL WASTE DISPOSAL—THE BASEL CONVENTION BAN AMENDMENT.....	132
VII. CASE STUDIES.....	134
A. Nigeria.....	135
B. Côte D’Ivoire (Ivory Coast).....	137
C. Haiti.....	138
VIII. REGULATIONS OF HAZARDOUS WASTE IN THE UNITED STATES.....	139
IX. RE-EVALUATING INTERNATIONAL WASTE TRANSPORT...	141
CONCLUSION .....	143

## INTRODUCTION

Environmental justice is a dynamic concept that draws on civil rights and environmental law principles, along with economic and social justice notions. Environmental injustice disproportionately exposes racially marginalized groups to pollutants from industry, toxic waste, poor land management, natural resource extraction, climate-related harms, and limits access to clean water.<sup>1</sup> The term environmental injustice also describes relationships between industrialized and developing nations; eco-racism threatens all people's health, overall well-being, and safety.<sup>2</sup>

Marginalized groups suffered environmental discrimination for decades in the United States before environmental justice and environmentalism became a topic of discussion. A study conducted by the United Church of Christ's Commission for Racial Justice (the Commission) pushed environmental justice to the forefront of the U.S.'s national conversation in 1987.<sup>3</sup> The Commission detailed a correlation between race and the location of hazardous waste materials throughout communities across the United States.<sup>4</sup> Since then, numerous studies and reports emphasized that communities of color and low-income areas continue to have higher exposure rates to air pollution, hazardous waste dumping, and poor land management compared to their white, non-Hispanic counterparts.<sup>5</sup> Despite these critical studies and changing administrations, U.S. policies inadequately addressed or incorporated environmental justice principles.

## I. HISTORY OF DOMESTIC ENVIRONMENTAL DISCRIMINATION

The U.S. has an extensive history of domestic environmental discrimination. In 1971, the U.S. Council on Environmental Quality recognized a disproportionate link between environmental pollutants and

---

\* Christine Paul is a Class of 2023 Presidential Management Fellow. She holds a J.D. from Vermont Law and Graduate School and a B.S. in Biology from St. John's University. Christine is dedicated to environmental law and justice, and thanks Professor Catherine Fregosi and Christine Ryan for their invaluable support while writing.

1. Rachel Morello-Frosch & Osagie K. Obasogie, *The Climate Gap and the Color Line—Racial Health Inequities and Climate Change*, 388 NEW ENG. J. MED. 943, 945 (2023).

2. *Id.*

3. COMM'N FOR RACIAL JUST., UNITED CHURCH OF CHRIST, TOXIC WASTE & RACE IN THE UNITED STATES: A NAT'L REP. ON RACIAL & SOCIO-ECON. CHARACTERISTICS OF CMTYS. WITH HAZARDOUS WASTE SITES, xiii (1987).

4. *Id.*

5. Robert D. Bullard, *Race and Environmental Justice in the United States*, 18 YALE J. INT'L L. 319, 320 (1993).

minorities, but did not address this causal link until 1978.<sup>6</sup> The environmental justice movement fully formed for the first time in the United States in 1978 when state officials decided to transport and bury toxic, contaminated soil in Afton, Warren County, North Carolina.<sup>7</sup> State legislation, the Department of Environment and Natural Resources, and the Environmental Protection Agency (EPA) Region 4 designated Warren County as the waste's final transfer site.<sup>8</sup> The waste consisted of polychlorinated biphenyls (PCBs), a known danger to human health.<sup>9</sup> North Carolina proceeded to illegally transfer approximately 30,000 gallons of toxic waste without citizens' knowledge along its roads in 1982.<sup>10</sup> Despite citizen outrage and a lawsuit by the National Association for the Advancement of Colored People (NAACP), the state transferred the toxic waste from the highway-side to a landfill in Warren County.<sup>11</sup> It took the state nearly 20 years to address the adverse effects of the contaminated material on the surrounding communities' health after authorities found leakage into local wells.<sup>12</sup>

The question of whether pollution levels in minority communities were disproportionately higher than their white counterparts regained legislative attention in 1990, and the EPA established an Environmental Equity Taskforce (EET).<sup>13</sup> EET's goal was to investigate whether "minorities experienced differences in exposure to waste, [the] incidence of disease associated with pollutions, [and] protection from regulatory standards aimed at a 'representative' consumer or worker enforcement that may vary by neighborhood."<sup>14</sup> EET found that communities of color suffer "greater than average" exposure to many pollutants, toxic waste, and lead; however, it concluded that there was little evidence to suggest that environmental causes

---

6. Christopher C. Ahlers, *Race, Ethnicity, and Air Pollution: New Directions in Environmental Justice*, 46 LEWIS & CLARK ENV'T L. 713, 731 (2016).

7. *Environmental Justice History*, U.S. DEP'T OF ENERGY, OFF. OF LEGACY MGMT., <https://www.energy.gov/lm/services/environmental-justice/environmental-justice-history> (last visited Dec. 8, 2024); see Matt Reinmann, *The EPA Chose This County for a Toxic Dump Because its Residents Were 'Few, Black, and Poor'*, TIMELINE (Apr. 3, 2017), <https://web.archive.org/web/20210208055314/https://timeline.com/warren-county-dumping-race-4d8fe8de06cb> (describing the Warren County landfill and the community's opposition).

8. Bullard, *supra* note 5, at 327-329.

9. *Id.* at 328.

10. *Environmental Justice History*, *supra* note 7.; Reinmann, *supra* note 7.

11. Bullard, *supra* note 5, at 328.

12. Will Atwater, *From Dumped on to Praised: New Documentary Reveals How Warren County Gave Birth to a Movement*, N.C. HEALTH NEWS (May 15, 2024), <https://www.northcarolinahealthnews.org/2024/05/15/from-dumped-on-to-praised-new-documentary-reveals-how-warren-county-gave-birth-to-a-movement/>.

13. James T. Hamilton, *Testing for Environmental Racism: Prejudice, Profits, Political Power?*, 14 J. POL'Y ANALYSIS & MGMT. 107, 108 (1995).

14. *Id.*

increased minority mortality rates, and the EPA did not give sufficient attention to matters of environmental equity.<sup>15</sup> The EET Chair stated that this lack of attention was due solely to economic factors and rejected systemic racism as a factor.<sup>16</sup> Following the EPA's assessment, Representative John Lewis introduced the Environmental Justice Act in 1993, a bill "designed to establish a program to assure non-discriminatory compliance with all environmental, health, and safety laws to ensure equal protection of public health."<sup>17</sup> Unfortunately, this bill died in Congress.<sup>18</sup>

Since then, studies have shown that hazardous waste and industrial facilities emitting dangerous chemicals into the air are placed within communities of predominantly Hispanic, Native American, and Black citizens.<sup>19</sup> For example, in 2017, the NAACP, the Clean Air Task Force, and the National Medical Association released a study showing that African Americans were exposed to 38% more polluted air compared to White Americans.<sup>20</sup> Further studies link these causes to increased cancer rates, congenital disabilities, childhood leukemia, respiratory problems, and shortened lifespans.<sup>21</sup>

## II. INTERNATIONAL ENVIRONMENTAL DISCRIMINATION

The same relationships that outline domestic environmental justice are paralleled on an international scale, and there is a similarly inequitable distribution of environmental hazards around the world. The rise of economic globalization, multinational corporations, and liberalized trade rules all play a key role in shifting environmental pollution from industrialized to developing countries.<sup>22</sup>

Incidences of environmental racism are not isolated to the domestic African American population. Rather, eco-racism extends to all corners of the global community—especially when examining transboundary waste

---

15. Hamilton, *supra* note 13.

16. *Id.*

17. Claire L. Hasler, *The Proposed Environmental Justice Act: "I Have a (Green) Dream."* 17 U. PUGET SOUND L. REV. 417, 445 (1994); *See also*, Environmental Justice Act of 1992, H.R. 2105, 103rd Cong. (1993-1994).

18. Hasler, *supra* note 17, at 418.

19. Bullard, *supra* note 5, at 329-341.

20. LESLEY FLEISCHMAN & MARCUS FRANKLIN, FUMES ACROSS THE FENCE-LINE: THE HEALTH IMPACTS OF AIR POLLUTION FROM OIL & GAS FACILITIES ON AFRICAN AMERICAN CMTYS. 6 (2017).

21. *See* U.S. DEP'T OF HEALTH & HUMAN SERVS., NAT'L STAKEHOLDER STRATEGY FOR ACHIEVING HEALTH EQUITY 3 (2009).

22. *CPR Perspective: International Environmental Justice and Climate Change*, CTR. FOR PROGRESSIVE REFORM, (Mar. 1, 2003), <https://progressivereform.org/publications/perspintlenvironjustice/> [hereinafter *CPR Perspective*].

transfer.<sup>23</sup> Governments and corporations from developed nations create hazardous waste within their home country and dispose of these byproducts in developing countries in Africa, South America, and Asia.<sup>24</sup> Waste disposal is costlier and more strictly regulated in developed countries than in developing countries.<sup>25</sup> Countries that take the waste often have inadequate waste disposal facilities, insufficient enforcement mechanisms, and inadequate personnel.<sup>26</sup> In the face of environmental racism, developed countries use poverty and race as convenience factors when deciding where to discard their waste. Low-income and low-education communities suffer from a lack of resources, leading to low participation and political representation.<sup>27</sup>

Lax enforcement and weak environmental regulations force developing countries to make trade-offs between environmental protection and economic prosperity. The underlying factors in the decision to ship waste across international seas and borders are: (1) availability of cheap land; (2) lack of opposition by the host country; (3) poverty; and (4) lack of mobility and regulation.<sup>28</sup> In other cases, reporters state, “[s]ome waste comes disguised as charity.”<sup>29</sup> Researchers have recorded incidents in which countries mislabeled waste as humanitarian aid.<sup>30</sup> This occurs more often with hospital waste than anything else.<sup>31</sup> When barrels of chemicals and medical waste are deposited in developing neighborhoods, locals may not have the necessary education and expertise to distinguish between toxic waste and possible medical aid. Corporations and countries save money when they do not have to negotiate with a community that cannot effectively resist.<sup>32</sup> Within developing countries, neighborhoods consisting of middle-class or wealthier families are spared.<sup>33</sup> These communities possess more resources, time, money, and political leverage than the poorer members of society. Not wanting to deal with increased public discourse and disposal opposition,

---

23. *CPR Perspective*, *supra* note 22.

24. *Id.*

25. *Id.*

26. *Id.*

27. Morello-Frosch, *supra* note 1 at 943; See also Lauren Bushnell, *Educational Disparities Among Racial and Ethnic Minority Youth in the United States*, BALLARD BRIEF (2021), <https://ballardbrief.byu.edu/issue-briefs/educational-disparities-among-racial-and-ethnic-minority-youth-in-the-united-states>.

28. Rozelia S. Park, *An Examination of International Environmental Racism Through the Lens of Transboundary Movement of Hazardous Wastes*, 5 *IND. J. OF GLOB. LEGAL STUD.* 659, 662 (1998).

29. *Id.* at 670.

30. *Id.*

31. *Id.*

32. *Id.* at 679.

33. Park, *supra* note 28, at 663.

corporations choose the path of least resistance when designating the location of a new facility.

### III. INTERNATIONAL INCIDENTS SPARK PUBLIC OUTCRY

In August of 1986, the *Khian Sea*, a cargo ship carrying 15,000 tons of toxic incinerator ash generated by the City of Philadelphia, headed for its destination in the Bahamas.<sup>34</sup> However, when it arrived, the Bahamian government refused to give the ship permission to dock.<sup>35</sup> This also occurred in the Dominican Republic, Honduras, and Bermuda, among others.<sup>36</sup> The ship subsequently sailed for another 16 months before dumping 4,000 tons of waste on the Western coast of Haiti under the guise of “topsoil fertilizer.”<sup>37</sup> When the government realized the true nature of the waste, it insisted that the ship re-board its cargo—but it was too late.<sup>38</sup> The crew, again, tried to unload the rest of the toxic cargo before being allowed to dock at the port of Singapore for repairs.<sup>39</sup> The *Khian Sea* later arrived without any cargo, and the crew refused to disclose where they disposed of the waste.<sup>40</sup> Under threat of legal action, the *Khian Sea*’s captain finally admitted that the crew dumped the ship’s contents in the Indian and Atlantic Oceans.<sup>41</sup> The captain never defined specific disposal boundaries, and no government ordered studies on the effects of the illegal dumping of hazardous waste on the Indian and Atlantic Oceans.<sup>42</sup>

Another similar incident occurred in August 2006, when the cargo ship *Probo Koala*, originating from the Netherlands, deposited 500 cubic meters

---

34. Park, *supra* note 28, at 669.

35. *Id.*

36. *The Ship that Dumped America’s Waste*, WITNESS HISTORY (Nov. 13, 2018), <https://www.bbc.co.uk/programmes/p06rm27x>; See also, Mike Clary, *Wanted: Final Resting Place for Huge Trash Pile*, L.A. TIMES (Mar. 18, 2001), <https://www.latimes.com/archives/la-xpm-2001-mar-18-mn-39435-story.html>; Jim Detjen, *2 Khian Sea Officials Convicted of Perjury*, PHILLY.COM (June 4, 1993), [https://web.archive.org/web/20140116131538/http://articles.philly.com/1993-06-04/news/25972595\\_1\\_khian-sea-john-patrick-dowd-coastal-carriers](https://web.archive.org/web/20140116131538/http://articles.philly.com/1993-06-04/news/25972595_1_khian-sea-john-patrick-dowd-coastal-carriers).

37. *The Ship that Dumped America’s Waste*, WITNESS HISTORY (Nov. 13, 2018), <https://www.bbc.co.uk/programmes/p06rm27x>.

38. *Id.*

39. Jim Detjen, *2 Khian Sea Officials Convicted of Perjury*, PHILLY.COM (June 4, 1993), [https://web.archive.org/web/20140116131538/http://articles.philly.com/1993-06-04/news/25972595\\_1\\_khian-sea-john-patrick-dowd-coastal-carriers](https://web.archive.org/web/20140116131538/http://articles.philly.com/1993-06-04/news/25972595_1_khian-sea-john-patrick-dowd-coastal-carriers).

40. *Id.*

41. Mark Jaffe, *Garbage Barge (Khian Sea)*, ENCYCLOPEDIA OF GREATER PHILA. (2016), <https://philadelphiaencyclopedia.org/essays/garbage-barge-khian-sea/>.

42. Jaffe, *supra* note 41; See also Simone M. Müller, *The Toxic Ship: The Voyage of the Khian Sea and the Global Waste Trade*, U. WASH. PRESS (2023), <http://www.jstor.org/stable/jj.8362578>.

of toxic waste in Abidjan, Côte d'Ivoire.<sup>43</sup> The waste was later dumped amongst 18 different sites within the city.<sup>44</sup> According to official estimates, 15 residents died, 69 were hospitalized, and over 100,000 individuals sought medical treatment due to the effects of the toxic waste.<sup>45</sup> Unlike the *Khian Sea* incident, the residents in Abidjan still suffer recordable effects of this hazardous waste disposal, such as headaches, skin lesions, and respiratory issues.<sup>46</sup> Many residents can no longer access free medication and care since the immediate free programs have ended.<sup>47</sup> Only 63% of registered victims received compensation under a 2007 settlement with the Ivorian government and Trafigura, the Dutch-contracted company responsible for operating the *Probo Koala*.<sup>48</sup> In addition to suffering the physical effects, Abidjan remained in the dark regarding the presence of toxic materials in its water supply and surrounding food chain.<sup>49</sup> The inadequate response to these incidents questions the international communities' willingness to tackle environmental health and regulation on a global scale, especially when examining populations of color.

#### IV. TOXIC WASTE OVERVIEW

Waste generation and disposal are becoming increasingly relevant issues as the world's population increases. There is an unmistakable correlation between population growth and the amount of waste generated per capita.<sup>50</sup> Industrialized countries, such as the United States or China, generate more waste per capita than less developed countries like Nigeria or Haiti.<sup>51</sup> Waste is generated at different stages of industry and is classified based on different characterizations.<sup>52</sup> Some waste is more hazardous or toxic than others, and these classifications ensure that waste is handled and disposed of

---

43. *Trafigura: A Toxic Journey*, AMNESTY INT'L (Apr. 11, 2016), <https://www.amnesty.org/en/latest/news/2016/04/trafigura-a-toxic-journey/>. Note that one cubic meter of liquid waste is roughly equivalent to one ton.

44. Rob White, *Toxic Cities: Globalizing the Problem of Waste*, 35 SOC. JUST. 107, 109 (2008-09).

45. *Id.*

46. *Trafigura: A Toxic Journey*, *supra* note 43; *See also Toxic Wastes Caused Deaths, Illnesses in Cote d'Ivoire*, U.N. NEWS (Sept 16, 2009), <https://news.un.org/en/story/2009/09/312652>.

47. *Trafigura: A Toxic Journey*, *supra* note 43 (describing the facts surrounding the Trafigura incident in Côte d'Ivoire).

48. *Côte d'Ivoire: 10 Years On, Survivors of Toxic Waste Dumping 'Remain in the Dark,' Say U.N. Rights Experts*, U.N. NEWS (Aug. 17, 2016), <https://news.un.org/en/story/2016/08/536822-cote-divoire-10-years-survivors-toxic-waste-dumping-remain-dark-say-un-rights> (describing the resulting environmental effects on Abidjan).

49. *Id.*

50. White, *supra* note 44, at 114.

51. S. Gozie Ogbodo, *Environmental Protection in Nigeria: Two Decades After the Koko Incident*, 15 ANN. SURV. INT'L & COMPAR. L. 1, 5 (2009).

52. *Id.*

appropriately and safely.<sup>53</sup> The United Nations defines hazardous waste as “[a]ny waste or combination of wastes with the potential to damage human health, living organisms, or the environment.”<sup>54</sup> Hazardous wastes generally “require special handling and disposal procedures regulated by national and international laws.”<sup>55</sup> Hazardous waste is mainly generated by chemical manufacturing, waste treatment and disposal, and manufacturing iron, steel, petroleum, and coal products.<sup>56</sup> Everyday products also generate hazardous waste, such as paint, electronics, batteries, and cosmetics.<sup>57</sup>

Because hazardous waste can be found in various physical states, there is not a universal way to dispose of the waste. Historically, people disposed of solid hazardous wastes in a regular landfill, resulting in hazardous waste seepage.<sup>58</sup> Seepage would eventually contaminate natural water systems.<sup>59</sup> In industrialized countries, there are regulations to monitor proper hazardous waste disposal and prevent groundwater contamination.<sup>60</sup> Such processes include isolation, incineration, or recycling.<sup>61</sup> More than 400 million tons of hazardous wastes are produced internationally, the bulk of which is generated by industrialized nations.<sup>62</sup> For example, the U.S. produces more than 250 million tons of hazardous waste each year.<sup>63</sup> Mining companies alone dump 180 million tons of hazardous waste into waterways, including oceans, rivers, and lakes.<sup>64</sup> Annually, the U.S. produces an average of more than 1,700 pounds of waste—including plastic, food, and hazardous byproducts—per person.<sup>65</sup> Five percent of the world’s population generates 40% of the

---

53. 42 U.S.C. § 6927.

54. *Hazardous Waste*, U.N. ENV’T, <https://globalpact.informea.org/glossary/hazardous-waste> (last visited Dec. 9, 2024).

55. *Id.*

56. *Hazardous Waste Statistics: Tonnes of Hazardous Waste Thrown Out*, THE WORLD COUNTS, <https://www.theworldcounts.com/challenges/planet-earth/waste/hazardous-waste-statistics> (last visited Dec. 19, 2024).

57. *Hazardous Waste Facts*, THE WORLD COUNTS, <https://www.theworldcounts.com/stories/hazardous-waste-facts> (last visited Dec. 19, 2024).

58. Rachana Malviya & Rubina Chaudhary, *Factors Affecting Hazardous Waste Solidification/Stabilization: A Review*, 137 J. HAZARDOUS MATERIALS 267, 267 (2006).

59. *Id.* at 274.

60. *Learn the Basics of Hazardous Waste*, EPA (Apr. 11, 2024), <https://www.epa.gov/hw/learn-basics-hazardous-waste>.

61. *Hazardous Waste Facts*, *supra* note 57.

62. *Hazardous Waste Statistics*, *supra* note 56.

63. *Id.*

64. Payal Sampat, *Over 180M Tons of Toxic Waste Dumped Into World’s Oceans, Rivers, and Lakes Each Year*, EARTH ISLAND J. (Feb. 28, 2012), [https://www.earthisland.org/journal/index.php/articles/entry/over\\_180m\\_tons\\_of\\_toxic\\_waste\\_dumped\\_into\\_worlds\\_oceans\\_rivers\\_and\\_lakes\\_ea](https://www.earthisland.org/journal/index.php/articles/entry/over_180m_tons_of_toxic_waste_dumped_into_worlds_oceans_rivers_and_lakes_ea).

65. *Shocking Waste Generation and Recycling Statistics Revealed: U.S. in the Top 10 Highest Risk Countries*, ACTENVIRO (Aug. 14, 2015), <https://www.actenviro.com/recycling-statistics/>; *See Hazardous*



world's waste, whereas developing countries only generate approximately 1%.<sup>66</sup>

## V. RELEVANT TREATIES AND THEIR WEAKNESSES

Multilateral environmental agreements (MEAs) are a means to address and promote international environmental justice. The Basel, Bamako, and Stockholm Conventions are three MEAs incorporating the principles of environmental justice; however, incidents like the illegal dumping of hazardous waste undermine the effectiveness of these agreements.<sup>67</sup>

### *A. The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal*

The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal (Basel Convention) is an international treaty designed to address the transport of hazardous waste between industrialized and developing countries after the *Khian Sea* incident.<sup>68</sup> The Basel Convention, established in 1989, prevents the shipment and disposal of hazardous waste from industrial to developing countries.<sup>69</sup> This international treaty establishes a procedure of strict conditions, such as requiring receiving countries to explicitly consent to any transboundary movement of hazardous waste into their borders.<sup>70</sup> The Basel Convention applies to toxic, corrosive, infectious, explosive, and flammable waste.<sup>71</sup> The

---

*Waste Statistics to Know in 2021*, HAZARDOUS WASTE HAULERS ENV'T, <https://www.hwenvironmental.com/facts-and-statistics-about-waste/> (last visited Dec. 19, 2024) (sharing other waste statistics with hyperlinks to direct sources).

66. See *Waste Export Control: Hearing on H.R. 2525 Before the Subcomm. on Transportation and Hazardous Materials of the House Comm. on Energy and Commerce*, 101st Cong. 156 (1989) (statement of Rep. John Conyers) (describing how the U.S.'s highly unequal hazardous waste production negatively impacts the world).

67. Lisa Widawsky, *In My Backyard: How Enabling Hazardous Waste Trade to Developing Nations Can Improve the Basel Convention's Ability to Achieve Environmental Justice*, 38 ENV'T L. 577, 586 (2008).

68. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 U.N.T.S. 126 at 17 ("Environmentally sound management of hazardous wastes or other wastes," which it defines as "taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes." The Basel Convention differentiates between "hazardous wastes," and "other wastes," and asserts jurisdiction over certain wastes from both categories specified in the annexes to the Basel Convention. Hazardous wastes covered by the Basel Convention are those that are "toxic, poisonous, explosive, corrosive, flammable, ecotoxic, and infectious.") [hereinafter *The Basel Convention*].

69. *The Basel Convention*, *supra* note 68, at 15.

70. *Id.*

71. *The Basel Convention*, *supra* note 68, at 15.

Basel Convention does not address radioactive waste; in May 2019, new amendments improved control of plastic waste as regulated material.<sup>72</sup> Finally, the Basel Convention mandates that nations decrease the amount of waste individual countries generate while maintaining their management close to home.<sup>73</sup>

Aiming to protect human health and the environment against the generation, management, and movement of waste, parties to the treaty adopted the Basel Convention in 1989.<sup>74</sup> It first came into force in 1992, and currently boasts 53 countries joining as signatories and 191 countries as parties.<sup>75</sup> Under the Basel Convention, parties have specific obligations centered on disseminating information. The Basel Convention requires that a receiving country give notice and written confirmation prior to exporting any waste.<sup>76</sup> The exporting country must notify the receiving country and any transit countries of the proposed shipment of waste.<sup>77</sup> Accordingly, waste transport can only occur once the receiving country grants consent.<sup>78</sup> Once consent is given, the waste transport must be accompanied by an international movement document until it reaches its final destination.<sup>79</sup> The Basel Convention also requires signatories to share national definitions of hazardous waste in addition to those listed in the Annexes of the Basel Convention.<sup>80</sup>

The Basel Convention also regulates any decision to restrict or prohibit imports or exports of hazardous waste. Importantly, the Basel Convention contains two major restrictions on waste transport. The first restriction requires that exports of waste occur only under the following circumstances: (1) if the exporting country does not have sufficient disposal or recycling capacity;<sup>81</sup> (2) if the exporting country does not have disposal and recycling facilities that can manage the waste in an environmentally sound manner;<sup>82</sup>

---

72. *Basel Convention Plastic Waste Amendments*, BASEL CONVENTION & U.N. ENV'T PROGRAMME, <https://www.basel.int/Implementation/Plasticwaste/Amendments/Overview/tabid/8426/Default.aspx> (last visited, Jan. 9, 2025).

73. *Id.*

74. The Basel Convention, *supra* note 68, at 26.

75. *Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, BASEL CONVENTION & U.N. ENV'T PROGRAMME, <https://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx#enote1> (last visited Jan. 9, 2025).

76. The Basel Convention, *supra* note 68, at 26.

77. *Id.* at 25–26.

78. *Id.*

79. *Id.* at 23.

80. *Id.* at 34.

81. *Id.* at 28.

82. The Basel Convention, *supra* note 68, at 17.

or (3) if the waste is required as a raw material for recycling or recovery industries in the importing country.<sup>83</sup>

The U.S. has signed, but not ratified the Basel Convention, making it a notable Non-Party.<sup>84</sup> The Basel Convention restricts hazardous waste trade between Parties and Non-Parties without certain agreements in place.<sup>85</sup> The U.S. has several such agreements that allow it to ship hazardous waste to Party countries.<sup>86</sup> The Organization for Economic Cooperation and Development (OECD) Council also regulates transboundary hazardous waste between OECD member countries through its own governing system.<sup>87</sup> This allows the OECD countries to continue trading in waste with countries like the United States that have not ratified the Basel Convention.<sup>88</sup>

Article 4 of the Basel Convention creates a mechanism to decrease the waste generated within national boundaries.<sup>89</sup> The Basel Convention calls for countries to keep waste within their boundaries and as close as possible to their source of generation, providing incentives for waste reduction and pollution prevention.<sup>90</sup>

### *B. The Bamako Convention*

In January 1991, 12 nations of the African Union (formerly Organization of African Unity) negotiated the Bamako Convention in response to Article 11 of the Basel Convention.<sup>91</sup> Article 11 encourages parties to enter into bilateral, multilateral, and regional agreements on hazardous waste to help achieve the Basel Convention's objectives.<sup>92</sup> The Bamako Convention, which came into force in 1998, aims to protect the health of populations and the environment of African countries by banning the import of all hazardous and radioactive waste.<sup>93</sup> The Bamako Convention was a direct result of the

---

83. *Id.*

84. *Basel Convention on Hazardous Waste*, OFF. ENV'T QUALITY, <https://www.state.gov/key-topics-office-of-environmental-quality-and-transboundary-issues/basel-convention-on-hazardous-wastes/> (last visited Jan. 9, 2025).

85. *Id.*

86. *Id.*

87. *Id.*; *Transboundary Movements of Waste*, ORG. FOR ECON. COOP. & DEV., <https://www.oecd.org/en/data/tools/transboundary-movements-of-waste.html> (last visited Jan. 9, 2025).

88. *Transboundary Movements of Waste*, ORG. FOR ECON. COOP. & DEV., <https://www.oecd.org/en/data/tools/transboundary-movements-of-waste.html> (last visited Jan. 9, 2025).

89. The Basel Convention, *supra* note 68, at 14–18.

90. *Id.* at 15.

91. Chukwuka N. Eze, *The Bamako Convention on the Ban of the Import into Africa and the Control of the Transboundary Movement and Management of Hazardous Wastes within Africa: A Milestone in Environmental Protection?*, 15 AFRICAN J. INT'L & COMPAR. L. 208, 211 (2007).

92. The Basel Convention, *supra* note 68, at 27.

93. Eze, *supra* note 91, at 211, 222.

Basel Convention's failure to prohibit hazardous waste trade to developing countries, especially when most developed nations export to African nations.<sup>94</sup>

The Bamako Convention is similar to the Basel Convention, except that the Bamako Convention contains stronger language prohibiting all imports of hazardous waste, and does not make exceptions for certain hazardous waste, contained in the Basel Convention.<sup>95</sup> The Bamako Convention covers more kinds of waste than the Basel Convention by including radioactive wastes and any waste with a listed hazardous characteristic. The Bamako Convention also covers national definitions of hazardous waste.<sup>96</sup>

The Bamako Convention provides that participating countries should ban importing and dumping hazardous and radioactive waste.<sup>97</sup> For the intra-African waste trade, parties must minimize transboundary waste movement and only move hazardous waste with the consent of the importing and transit countries, among other controls.<sup>98</sup> Parties must also reduce the production of hazardous waste and cooperate to ensure that waste is treated and disposed of in an environmentally sound manner.<sup>99</sup> Finally, the Bamako Convention aims to improve and ensure rational environmental management within the African continent and promote cooperation between African nations.<sup>100</sup>

### *C. The Stockholm Convention on Persistent Organic Pollutants*

The Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention) is an international environmental treaty, signed in 2001 and ratified in 2004, to eliminate the production, use, and transport of Persistent Organic Pollutants (POPs).<sup>101</sup> POPs are toxic chemical substances that persist in the environment and bioaccumulate through the food web.<sup>102</sup> Like hazardous waste, POPs pose a threat to human health and the environment.<sup>103</sup>

---

94. Eze, *supra* note 91, at 213.

95. *Id.* at 217 (showing how hazardous waste may include waste such as radioactive materials).

96. *Bamako Convention: Preventing Africa From Becoming a Dumping Ground for Toxic Wastes*, U.N. ENV'T PROGRAMME (Jan. 30, 2018), <https://www.unep.org/news-and-stories/press-release/bamako-convention-preventing-africa-becoming-dumping-ground-toxic>.

97. *Id.*

98. *Id.*

99. Eze, *supra* note 91, at 227.

100. *Id.* at 223.

101. Stockholm Convention on Persistent Organic Pollutants art. 3, May 23, 2001, 2256 U.N.T.S. 119.

102. Stockholm Convention on Persistent Organic Pollutants (POPs), U.N., <https://pops.int/TheConvention/Overview/tabid/3351/Default.aspx> (last visited Nov. 30, 2024).

103. *Our Focus: Safeguarding Environment Implementation Multilateral Environmental Agreements*, U.N. INDUS. DEV. ORG., <https://www.unido.org/our-focus-safeguarding-environment>.

Under the Stockholm Convention, there is a process to review and regulate POPs that pose a particular threat when transported internationally.<sup>104</sup> POPs must be disposed of in an environmentally safe way to prevent further harm to living things and the environment.<sup>105</sup> The general provisions of the Stockholm Convention mandate that developed countries provide financial assistance and resources to developing nations to decrease the amount and types of internationally used POPs.<sup>106</sup> Currently, the Stockholm Convention bans 12 POPs.<sup>107</sup> Additional goals of the Stockholm Convention include: transitioning to safer alternatives; targeting additional POPs for action; cleaning old stockpiles and equipment containing POPs; and working together internationally for a POPs-free future.<sup>108</sup>

#### VI. LOOPHOLES AND ILLEGAL WASTE DISPOSAL—THE BASEL CONVENTION BAN AMENDMENT

Each treaty described above states that illegal hazardous waste transport violates their terms, but none contain any enforcement provisions or means to hold violators accountable. Article 12 of the Basel Convention directs parties to adopt protocols that establish liability rules and procedures for damage resulting from hazardous waste transport across borders.<sup>109</sup>

After initially adopting the Basel Convention, developing countries and environmental organizations argued that it did not go far enough to protect the environment and developing nations.<sup>110</sup> Some also noted the Basel Convention's failure to incorporate a mechanism to hold violators responsible.<sup>111</sup> Many nations and nongovernmental organizations argued for a total ban on all hazardous waste shipments to developing countries.<sup>112</sup> Because the Basel Convention provided certain exceptions to recycled products, many waste contractors and individual actors exploited the system

---

implementation-multilateral-environmental-agreements/stockholm-convention (last visited Oct. 19, 2024).

104. *Id.*

105. M. Porta & E. Zumeta, Editorial, *Implementing the Stockholm Treaty on Persistent Organic Pollutants*, 59 OCCUPATIONAL & ENV'T MED. 651, 651–52 (2002).

106. *Id.*

107. *The 12 Initial POPs Under the Stockholm Convention*, STOCKHOLM CONVENTION, <https://www.pops.int/TheConvention/ThePOPs/The12InitialPOPs/tabid/296/Default.aspx> (last visited Oct. 12, 2024).

108. Stockholm Convention on Persistent Organic Pollutants, *supra* note 101, at art. 4, 5, 6.

109. The Basel Convention, *supra* note 68, at 27.

110. Widawsky, *supra* note 67, at 610–11 (noting that in 1995 the Basel Ban Amendment, which banned the exportation of hazardous waste from developed countries to developing countries, was adopted and accepted by 86 countries and the European Union).

111. Widawsky, *supra* note 67, at 610–11.

112. *Id.* at 587.

by justifying all hazardous waste exports as recycled materials that could be safely disposed of elsewhere.<sup>113</sup> This became one of the major factors leading to the signing and ratification of regional agreements, such as the Bamako Convention.

In the Basel Convention, nations have the right to restrict the importation of hazardous waste into their borders for any reason.<sup>114</sup> The Basel Convention further obligates exporting nations to prohibit waste movements when an importing nation has not given express consent.<sup>115</sup> By granting developing nations the right to reject hazardous waste shipments, the Basel Convention sought to alleviate the pressure developing nations felt to accept waste. This is especially important as most developing nations lack the infrastructure to manage that waste in an environmentally sound manner.<sup>116</sup> Ideally, this empowers developing nations to have the final say in accepting hazardous waste movements, thus reducing the environmental burdens developing nations assume. However, these provisions fail if developed nations can still take advantage of lesser-powered developing nations, or individuals can act unpunished.

The Basel Convention establishes a mechanism to address illegal hazardous waste trafficking, including any non-compliant transboundary movement of hazardous waste.<sup>117</sup> The Basel Convention requires each Party to take appropriate legal and administrative measures to prevent and punish any illegal activity inconsistent with its provisions.<sup>118</sup> Article 9 requires each Party to introduce national legislation and to provide an annual national report detailing all movement of hazardous waste.<sup>119</sup>

In addition to enacting national legislation, the Basel Convention attempts to establish subsidiaries within its body to further address the illegal hazardous waste trade. The Basel Convention's Mechanism for Promoting the Implementation and Compliance of the Basel Convention (Compliance Committee) first convened in 2003.<sup>120</sup> The Basel Convention established the Compliance Committee as a body that was "non-confrontational," "non-

---

113. The Basel Convention, *supra* note 68, at 17–18; Jeffrey M. Gaba, *Exporting Waste: Regulation of the Export of Hazardous Wastes from the United States*, 36 W. & M. ENVTL. L. & POL'Y REV. 405, 417–18 (2012).

114. Gaba, *supra* note 113, at 419.

115. The Basel Convention, *supra* note 68, at 20.

116. *Id.* at 27.

117. *Id.* at 23–25. This includes complying with the notification and consent requirements of the Convention by all states concerned, with consent obtained fraudulently, in a way that does not conform to the documents accompanying such movement, or in a way that results in "deliberate disposal (e.g. dumping) of hazardous wastes or other wastes in contravention of this Convention." *Id.* at 24.

118. Widawsky, *supra* note 67, at 592.

119. *Id.*

120. Widawsky, *supra* note 67.

binding,” and “preventive in nature,” to “review collected information to monitor compliance and assist parties with achieving compliance.”<sup>121</sup> Along with these “preventive mechanisms, the Basel Convention also adopted the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Wastes and Their Disposal in 1999.”<sup>122</sup> This protocol was intended to help parties, especially developing nations, address violations.<sup>123</sup> However, the Basel Convention fails to ensure proper participation and enforcement against illegal hazardous waste transport without a binding mechanism.

In March 1994, parties to the Basel Convention passed the Basel Convention Ban Amendment, in part to address these irregularities.<sup>124</sup> The Basel Convention prohibited parties listed in Annex VII (members of OECD, the E.U., and Liechtenstein) from all transboundary hazardous waste movements to non-OECD countries.<sup>125</sup> Despite all good intentions, the Basel Convention Ban Amendment failed to include a system of criminal liability to hold illegal hazardous waste transporters accountable.<sup>126</sup> Companies and individuals can work around Basel Convention provisions, and without proper deterrence, this will deteriorate developing nations’ capacity to address human and environmental health.

## VII. CASE STUDIES

Inadequate solid and hazardous waste management facilities in developing countries result in indiscriminate disposal and unsanitary environments, threatening human health. The tragedies associated with ineffective transboundary waste regulation emphasize the Basel Convention’s failure to protect developing nations from environmental catastrophes. Thirty-two years after its proposal, the Basel Convention has not addressed its purpose and failures effectively. The following is a description of three case studies examining the possible mechanism, or lack

---

121. Widawsky, *supra* note 67, at 592.

122. *Id.*

123. *Id.*

124. *The Basel Convention Ban Amendment*, BASEL CONVENTION, <http://www.basel.int/Implementation/LegalMatters/BanAmendment/Overview/tabid/1484/Default.aspx> (last visited Dec. 31, 2024).

125. *Id.*

126. The Basel Convention, *supra* note 68. The Convention has partnered with the Environment Network for Optimizing Regulatory Compliance on Illegal Traffic (ENFORCE), a network of experts, to promote compliance with the provisions the Basel Convention related to combatting and preventing illegal traffic of hazardous waste. *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, U.N., <https://www.basel.int/Implementation/LegalMatters/IllegalTraffic/Meetings/ENFORCE8Brussels2024/tabid/9702/Default.aspx> (last visited Jan. 12, 2025).

thereof, that could aid these nations in effectively managing and refusing imports of hazardous waste.

### *A. Nigeria*

In 1988, the small fishing village of Koko, Nigeria, made international headlines when it became known that two Italian firms had arranged to store 18,000 drums of hazardous waste with Koko residents.<sup>127</sup> The firms disguised the containers as building materials and offloaded them into a local man's vacant backyard for \$100 per month.<sup>128</sup> Local students discovered leaks and correlating health effects on the community and alerted the Daily Times, a Nigerian government-run newspaper.<sup>129</sup> Investigators later found Italian importer Gianfranco Raffaelli, living in Nigeria.<sup>130</sup> The investigators determined that Raffaelli was responsible for making payments to the local farmer, and he routinely diverted ships from their legal destinations to smaller port cities, like Koko, where cargo inspections were lax.<sup>131</sup> The Nigerian government worked with Italy to hold the Italian firm responsible and mandated removal of the waste from Koko.<sup>132</sup> After the 1988 Koko waste disaster, Nigeria needed to establish agencies dedicated to preventing further environmental harm. That same year, the Nigerian president signed the Federal Environmental Protection Agency (FEPA) into law.<sup>133</sup> FEPA became the country's environmental watchdog and was later incorporated into the Ministry of the Environment.<sup>134</sup>

Nigeria charges specific institutions with implementing, executing, and enforcing legislation and environmental law regulations.<sup>135</sup> However, these

---

127. See Stephanie Buck, *In the 1980s, Italy Paid a Nigerian Town \$100 a Month to Store Toxic Waste—And it's Happening Again*, TIMELINE (May 26, 2017), <https://medium.com/timeline/koko-nigeria-italy-toxic-waste-159a6487b5aa> (explaining that the drums contained chemicals such as PCBs and asbestos fibers).

128. See *id.* (explaining how the local farmer was unsuspecting and misled to believe the contents of the drums were harmless).

129. See *id.* (explaining that the students found the leaks); see also Claudio De Majo, *Italy's Poison Ships: How an International Trade of Hazardous Waste Sparked a Grassroots Struggle for Environmental Justice*, ARCADIA (2020) (describing the leaks and the contamination).

130. Buck, *supra* note 127.

131. *Id.*

132. *Id.*

133. See *Federal Environmental Protection Agency Act*, U.N. ENV'T PROGRAMME, <https://leap.unep.org/en/countries/ng/national-legislation/federal-environmental-protection-agency-act> (last visited Dec. 31, 2024) (documenting the enactment of the Federal Environmental Protection Agency Act in Nigeria).

134. National Environmental Standards and Regulations Enforcement Agency (Establishment) Act (2007) Cap. (25) (Nigeria) [hereinafter NESREA].

135. See NESREA, *supra* note 134 (establishing environmental regulations and standards in the country).



institutions are not adequately empowered to implement and execute policies or enforce environmental laws, especially regarding hazardous waste. In addition to creating FEPA, the Nigerian government passed the Harmful Waste Special Criminal Provisions Act of 1988, addressing illegal hazardous waste dumping.<sup>136</sup> Also found within the Ministry's structure, the National Environmental Standards and Regulations Enforcement Agency (NESREA) is the environmental agency responsible for managing concerns over hazardous waste.<sup>137</sup> Established by the Federal Government of Nigeria in 2007, NESREA ensures Nigerians have access to a clean and healthy environment.<sup>138</sup> During NESREA's creation, the National Assembly of Nigeria cited the need for "protection . . . of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources."<sup>139</sup> As a regulator, NESREA develops and enforces relevant environmental regulations and standards, and implements various environmental programs.<sup>140</sup> For example, NESREA works with multiple stakeholders to address illegal electronic waste imports.<sup>141</sup> NESREA is responsible for discovering ships containing electronic waste.<sup>142</sup>

To avoid another Koko disaster, Nigeria's Ministry of the Environment must have an interest in preventing illegal hazardous waste imports. Although tasked with protecting human health and the environment, the Nigerian Ministry currently lacks legislation that effectively accomplishes this goal. Human and environmental health are threatened without laws in place and policy mechanisms that can address illegal waste imports. The Ministry of the Environment should assign NESREA to discover illegal hazardous waste and return shipments to ports of origin, as it does with electronic waste.

Legislation meant to *protect* people and the environment from the dangerous consequences of hazardous waste exposure is meaningless without effective enforcement agencies and mechanisms. Nigeria's Ministry of the Environment could expand its enforcement power by taking advantage

---

136. Harmful Waste (Special Criminal Provisions, etc.) Act (1988) Cap. (42) (Nigeria). *See also*, Ogbodo, *supra* note 51, at 2. (In 1990, the Harmful Waste Act ("the Act") was passed. The Act prohibits purchasing, selling, transporting, depositing, or storing harmful waste. Violators of the Act are held strictly liable, and their punishment can range from a fine, restoration of the polluted environment, or life imprisonment).

137. Ogbodo, *supra* note 51, at 12–13; NESREA, *supra* note 134, § 1(7)(c).

138. NESREA, *supra* note 134 (The agency is a function of the federal Ministry of Environment and is headed by the Director General, who also serves as the chief executive officer).

139. NESREA, *supra* note 134, § 1(2).

140. *NESREA as a Regulator*, NAT'L ENV'T STANDARDS & REGULS. ENV'T AGENCY, <https://www.nesrea.gov.ng/our-activities/nesrea-as-a-regulator/> (last visited Oct. 21, 2024).

141. *Id.*

142. *Id.*

of NESREA employees to discover and address illegal hazardous waste imports. This would be a major development in how Nigeria manages illegal action in both large-scale corporations and individual actors.

The Nigerian Criminal Code includes provisions dedicated to certain environmental issues. These provisions include actions against those who pollute waterways and manufacture goods with white phosphorous.<sup>143</sup> As globalization increases the hazardous waste transport problem, the Nigerian Criminal Code may be the most appropriate mechanism to hold individuals who illegally accept hazardous waste responsible.

The Koko incident was a rude awakening for the Nigerian government and neighboring African countries. However, further action is necessary to safeguard against illegal hazardous waste disposal and possible exposure. The Nigerian government must make considerable efforts to address hazardous waste threats to both human and environmental health.

#### *B. Côte D'Ivoire (Ivory Coast)*

In 2006, a cargo ship called *Probo Koala* dumped 500 tons of toxic waste in Abidjan, Côte d'Ivoire.<sup>144</sup> Trafigura, an Anglo-Dutch commodity trading company, dumped the hazardous waste at 18 sites around the city, along with many other unknown locations.<sup>145</sup> This was the result of Trafigura's decision not to dispose of the toxic waste in the Netherlands because the cost of proper disposal there totaled \$620,000, compared to the \$17,000 it cost in Côte d'Ivoire.<sup>146</sup> Trafigura never admitted any wrongdoing, despite paying the Ivorian government close to \$198 million.<sup>147</sup>

Côte d'Ivoire petitioned the United Nations Environment Programme (UNEP) following the incident in Abidjan.<sup>148</sup> The UNEP subsequently established the Special Trust Fund for Côte d'Ivoire and petitioned parties to donate and contribute financial support to implement an emergency plan to address the waste disposal disaster.<sup>149</sup> The UNEP Post Conflict and Disaster

---

143. Ogbodo, *supra*, note 51, at 1.

144. Press Release, United Nations Human Rights Office of the High Commissioner, Ten Years On, the Survivors of Illegal Toxic Waste Dumping in Côte d'Ivoire Remain in the Dark (Aug. 17, 2016) (on file with author) [hereinafter Press Release].

145. *Id.*

146. *Id.*

147. *Trafigura Finalizes Ivory Coast Toxic Waste Payout*, REUTERS (Sept. 23, 2009, 12:52 PM), <https://www.reuters.com/article/business/environment/trafigura-finalizes-ivory-coast-toxic-waste-payout-idUSTRE58M2VO/>.

148. *Côte d'Ivoire: Post-Conflict Environmental Assessment*, U.N. ENV'T PROGRAMME (Nov. 29, 2015), <https://www.unep.org/resources/assessment/cote-divoire-post-conflict-environmental-assessment-0>.

149. Vincent Jugault, *Implementation of Decision VIII/I on Côte d'Ivoire*, U.N. ENV'T PROGRAMME, <http://www.basel.int/Portals/4/Basel%20Convention/docs/pub/leaflets/270508.pdf>.

Management Branch subsequently coordinated with the Côte d'Ivoire Ministry of Environment (the Ministry) to develop Abidjan's hazardous waste management plan.<sup>150</sup> In 1981, Côte d'Ivoire established its Ministry of Environment and Sustainable Development, responsible for "implementing and monitoring the government's policy on environmental protection, urban sanitation, and sustainable development."<sup>151</sup> There is no information available regarding the Ministry's legislative, regulatory, or enforcement capabilities; logistically however, the Ministry is the most appropriate institution to handle such matters. Like Nigeria's NESREA, the Côte d'Ivoire Ministry must manage hazardous waste and enforce against both international and domestic bad actors.

### C. Haiti

In the late 1980s, the *Khian Sea* dumped 4,000 tons of toxic incinerator ash from Philadelphia onto a beach in Gonaive, Haiti.<sup>152</sup> After ten years of protest and advocacy, Haiti, the U.S. State Department, the City of Philadelphia, and the New York City Trade Waste Commission removed the ash and sent it back to the United States.<sup>153</sup> Despite the victory, Philadelphia only contributed \$50,000 to the cleanup, leaving the Haitian government to cover the rest.<sup>154</sup> The costs of the resulting health detriments cannot be accounted for, especially considering the deaths of some of the workers contracted to transport the waste in Haiti.<sup>155</sup> Like Nigeria and Côte d'Ivoire, Haiti proactively amended its constitution to include a provision banning all waste imports following the *Khian Sea* disaster.<sup>156</sup>

---

150. Jugault, *supra* note 149.

151. *Côte d'Ivoire – Ministry of the Environment and Sustainable Development*, U.N. ENV'T PROGRAMME GLOB. ALL. FOR BLDG. & CONSTR., <https://globalabc.org/members/our-members/ministry-environment-and-sustainable-development-cote-divoire-ministre-de>, (last visited Oct. 18, 2024).

152. Aaron Freeman, *Trashing Haiti*, MULTINATIONAL MONITOR (June 1995), [https://multinationalmonitor.org/hyper/issues/1995/03/mm0395\\_06.html](https://multinationalmonitor.org/hyper/issues/1995/03/mm0395_06.html).

153. *Id.*; see Bruce E. Beans, *The Waste that Didn't Make Haste*, WASH. POST (July 16, 2002), <https://www.washingtonpost.com/archive/politics/2002/07/17/the-waste-that-didnt-make-haste/2bb768b5-9e65-49a3-b2b2-45448251745f/> (describing how the waste transported from Haiti to Philadelphia).

154. *Id.*

155. Danielle Knight, *ENVIRONMENT-HAITI: U.S. Toxic Waste to Be Returned to Sender*, INTER PRESS SERV. NEWS AGENCY, <http://www.ipsnews.net/1998/11/environment-haiti-us-toxic-waste-to-be-returned-to-sender/> (last visited Oct. 21, 2024).

156. *Haiti 1987* (rev. 2012), CONSTITUTE, [https://www.constituteproject.org/constitution/Haiti\\_20121987](https://www.constituteproject.org/constitution/Haiti_20121987) (last visited Jan. 12, 2025).

In 1994, the Haitian government established the Ministry of the Environment.<sup>157</sup> The Haitian Ministry is responsible for “formulating and enforcing” the Government’s policy on environmental management, promoting sustainable development, and promoting environmental conservation.<sup>158</sup> Haitian officials are currently prioritizing other climate-related harms and natural disaster impacts over addressing illegal hazardous waste imports.<sup>159</sup> Regardless, Haiti must establish a regulatory body responsible for implementing, executing, and enforcing environmental law and regulations. The Haitian government and relevant stakeholders must prioritize these issues and others affecting the Haitian people and the environment.

#### VIII. REGULATIONS OF HAZARDOUS WASTE IN THE UNITED STATES

The international hazardous waste trade is controversial, even in the United States. Although the U.S. separates itself from the international conversation on hazardous waste transport, the federal government regulates the export of hazardous waste through the EPA.<sup>160</sup> The EPA has issued complex regulations establishing domestic provisions on hazardous waste exports under the Resource Conservation and Recovery Act (RCRA).<sup>161</sup> RCRA prohibits hazardous waste exports unless exporters comply with either a set of congressionally-defined notice and consent requirements or any international agreements that exist between the U.S. and the receiving country.<sup>162</sup> The U.S. is a party to three such international agreements:

---

157. *Ministry of the Environment (Haiti)*, DEV. AID, <https://www.developmentaid.org/donors/view/156975/ministry-of-the-environment-haiti-ministere-de-lenvironnement-haiti> (last visited Oct. 21, 2024).

158. *Id.*

159. *UN Summit Puts Global Spotlight on Land Degradation*, U.N. ENV’T PROGRAMME, <https://www.unep.org/news-and-stories/story/un-summit-puts-global-spotlight-land-degradation> (last visited Jan. 12, 2025); *See also Global response to drought takes center stage at U.N. land conference in Riyadh*, U.N. SUSTAINABLE DEV. GOALS (Dec. 3, 2024), <https://www.un.org/sustainabledevelopment/blog/2024/12/cop16-un-land-conference-opening-pr/#>.

160. *Summary of the Resource Conservation and Recovery Act*, EPA, <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act> (last visited Jan. 2, 2025).

161. RCRA is the U.S.’s primary law governing the disposal of solid and hazardous waste. RCRA was signed into law on October 21, 1976, to address the increasing problems the nation faced with respect to municipal and industrial waste. RCRA was an amendment to the Solid Waste Disposal Act of 1965, which was the first statute that specifically focused on improving solid waste disposal methods. Resource Conservation & Recovery Act of 2011, 42 U.S.C. §§ 6901–6992.

162. 42 U.S.C. § 6938(a).

bilateral agreements with both Canada and Mexico, and the OECD Decision governing the transboundary movement of hazardous wastes.<sup>163</sup>

RCRA does not regulate what may be commonly considered hazardous waste.<sup>164</sup> Rather, Subtitle C of RCRA imposes regulatory requirements only on those materials that meet both EPA's regulatory definitions of "solid waste" and "hazardous waste."<sup>165</sup> Under RCRA, EPA defines solid waste as materials sent to a landfill.<sup>166</sup> Subtitle C also requires solid waste to be "hazardous" to warrant regulation.<sup>167</sup> Solid waste may be classified as hazardous if listed by the EPA, or if it exhibits hazardous characteristics.<sup>168</sup>

Subtitle C imposes specific requirements on hazardous waste management. First, any producer of hazardous waste must determine if their material is regulated.<sup>169</sup> Second, a hazardous waste manifest document must accompany any hazardous waste transportation.<sup>170</sup> Third, there are some limited requirements on hazardous waste transporters.<sup>171</sup> Fourth, most cases require that hazardous wastes must be disposed of or treated at facilities that have a federal hazardous waste permit.<sup>172</sup>

The EPA reports that the U.S. has bilateral agreements to export hazardous waste to only two countries: Canada and Mexico.<sup>173</sup> The Canada-U.S. and Mexico-U.S. agreements establish a notice and consent system for transboundary shipments of hazardous waste for "treatment, storage or disposal," similar to the Basel Convention.<sup>174</sup> Notification must be provided to the designated government authority at least 30 days prior to shipment.<sup>175</sup> The Mexico-U.S. agreement specifically defines hazardous waste transport

---

163. *International Agreements on Transboundary Shipments of Hazardous Waste*, U.S. EPA, <https://www.epa.gov/hwgenerators/international-agreements-transboundary-shipments-hazardous-waste#bilateral> (Sep. 26, 2024) [hereinafter *International Agreements*].

164. 42 U.S.C. §§ 6901–6992.

165. *Id.* § 6921; See generally Jeffrey Paul Luster, *The Domestic and International Legal Implications of Exporting Hazardous Waste: Exporting Naval Vessels for Scrapping*, 7 ENV'T L. 75 (2000).

166. 42 U.S.C. § 6924.

167. *Id.* § 6903(5).

168. Luster, *supra* note 165, at 111.

169. Gaba, *supra* note 113, at 412.

170. *Id.*

171. *Id.*

172. *Id.*

173. *International Agreements*, *supra* note 163.

174. The Canada Agreement is the Agreement between the Government of Canada and the Government of the United States Concerning the Transboundary Movement of Hazardous Waste. The Mexico Agreement is the Agreement of Cooperation between the United States of America and the United Mexican States Regarding the Transboundary Shipments of Hazardous Wastes and Hazardous Substance. *International Agreements*, *supra* note 163.

175. *International Agreements*, *supra* note 163.

to include recycling, reuse, and other utilization in addition to disposal, treatment, and storage.<sup>176</sup>

The Basel Convention prohibits the U.S. from shipping hazardous waste to any countries that are party to the Basel Convention because the U.S. is not party to the agreement.<sup>177</sup> The other parties may not consent to hazardous waste shipments from the U.S. unless pursuant to an international agreement that satisfies the requirements of Article 11 of the Basel Convention.<sup>178</sup> The EPA established that the OECD Decision and the Canada and Mexico Agreements satisfy these requirements.<sup>179</sup>

Importantly, although the U.S. has not ratified the Basel Convention, the Senate did consent to ratification in 1992.<sup>180</sup> The only necessary step to complete ratification is for the Executive Branch to submit the appropriate documentation.<sup>181</sup> Many believe the U.S. has not adopted the Basel Convention because of the perceived statutory changes to RCRA.<sup>182</sup> Some argue that not ratifying the Basel Convention may better serve U.S. control of the international trade in hazardous waste.<sup>183</sup> Regardless of the U.S.'s ratification of the Basel Convention, the EPA must be transparent with all hazardous waste exports.

#### IX. RE-EVALUATING INTERNATIONAL WASTE TRANSPORT

Western countries and their respective companies have a history of paying other nations to allow toxic waste disposal.<sup>184</sup> Due to economic challenges, some African countries have been financially induced to accept shipments of waste from the industrialized countries. Often, the payments are several times the country's annual gross domestic product (GDP), the

---

176. *International Agreements*, *supra* note 163.

177. *Id.*

178. The Basel Convention, *supra* note 68, at 27.

179. *International Agreements*, *supra* note 163.

180. See *Basel Convention on Hazardous Waste*, U.S. DEP'T OF STATE, <https://www.state.gov/key-topics-office-of-environmental-quality-and-transboundary-issues/basel-convention-on-hazardous-wastes/> (last visited Jan. 12, 2025) (explaining that the U.S. signed the Basel Convention in 1990. The U.S. Senate advised and consented to ratification in 1992, but Congress did not provide the necessary statutory authority needed to implement the convention).

181. See *Becoming a Party*, BASEL CONVENTION, <https://www.basel.int/procedures/becomingaparty/tabid/1280/default.aspx#> (last visited Jan. 12, 2025) (explaining the requirements to become a party to the Basel Convention).

182. Mary Tiemann, CONG. RSCH. SERV., 98-638 ENR, *Waste Trade and the Basel Convention: Background and Update* (1998).

183. *Id.*

184. See Ruth Michaelson, 'Waste Colonialism': World Grapples with West's Unwanted Plastic, *Guardian* (Dec. 31, 2021 7:58 AM), <https://www.theguardian.com/environment/2021/dec/31/waste-colonialism-countries-grapple-with-wests-unwanted-plastic#> (explaining how plastic waste from western nations gets disposed of in other countries).

monetary or market value of all final goods and services produced in the country.<sup>185</sup>

Geological factors limit many European countries' capacity to build hazardous waste processing/recycling facilities, leading them to export hazardous waste to developing countries.<sup>186</sup> For example, the Netherlands bans landfills.<sup>187</sup> This is no excuse to profit off developing countries and their environmental vulnerabilities. The global community must be able to operate equitably to achieve environmental justice. Parties to the Basel Convention should change the ineffective provisions to protect developing nations from bearing the brunt of environmental harms, especially concerning hazardous waste transport.

The U.N. can provide the support necessary to ensure countries equitably manage their hazardous waste. As a regulatory body, the U.N. protects human rights, delivers humanitarian aid, supports sustainable development and climate action, maintains international peace and security, and upholds international law.<sup>188</sup> The U.N. is the appropriate avenue to address international hazardous waste transport because the U.N.'s work touches every corner of the world and focuses on a broad range of fundamental issues.<sup>189</sup> The U.N. has the capacity to build bridges and offer meaningful financial support to developing countries so that they and their citizens do not resort to illegal means to support themselves. The U.N. can issue reports and recommendations regarding international environmental relationships between industrialized and developing countries. The U.N. can establish an international environmental tribunal to enforce international environmental law. This would allow small countries to hold large corporations accountable and criminally liable for their violations. Ultimately, having a clean and healthy environment is a human right, and it is imperative that everyone is afforded that right.<sup>190</sup>

---

185. Harry Anderson et al., *The Global Poison Trade*, NEWSWEEK 66 (Nov. 7, 1988) (explaining how a top government official in Guinea-Bissau justified his country's acceptance of importing toxic wastes by stating "we need the money.").

186. See generally Chunbo Zhang et al., *An Overview of the Waste Hierarchy Framework for Analyzing the Circularity in Construction and Demolition Waste Management in Europe*, 803 SCI. TOTAL ENV'T 1 (2022) (discussing waste generation in Europe).

187. *Rules for Dumping Sites*, NETH. ENTER. AGENCY (Aug. 2, 2022), <https://business.gov.nl/regulation/dumping-sites/>.

188. *Our Work*, U.N., <https://www.un.org/en/our-work> (last visited Oct. 18, 2024) (explaining how the United Nations builds a more sustainable world).

189. *The U.N. in General*, U.N. INFO. SERV. VIENNA, <https://unis.unvienna.org/unis/en/topics/the-un-in-general.html> (last visited Jan. 13, 2025).

190. *Access to a Healthy Environment, Declared a Human Right by U.N. Rights Council*, U.N. NEWS (Oct. 8, 2021), <https://news.un.org/en/story/2021/10/1102582>.

## CONCLUSION

Inadequate solid and hazardous waste management facilities in developing countries result in indiscriminate disposal and unsanitary environments, threatening human health and the environment. The challenges that Nigeria, Côte d'Ivoire, and Haiti face when managing hazardous waste imports into their boundaries represent similar challenges other developing countries face. This article's proposed solutions aim to tackle the internal pressures and difficulties developing countries face. Hopefully, these countries can realize those solutions with guided international support.