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Transboundary hazardous wastes and environmental justice: Implications for economically developing countries

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Abstract

The generation and international movement of hazardous wastes including their disposal in economically evolving world remains a topical issue in the environmental justice debate. Globally, it is estimated that more than 90 percent of wastes produced and traded annually are from industrialised nations. Most of these hazardous wastes are shipped to developing countries for recycling and disposal. The article argues that tightening of the weaker provisions of Basel Convention is urgently needed to assist the developing world, especially in Africa. This requires both technical transfer and capacity building given the consequences of hazardous wastes to human health and environment. Similarly, the Prior Informed Consent (PIC) procedure should be upgraded to meet the sound Environmental Impact Assessment (EIA) standard. This entails evaluating the potential risk and ability, thus allowing the importing countries to make an informed decision. The implication of this is that Basel has the potential to promote environmental justice if the key institutional reforms are made without a total ban on wastes trade in developing world.

Keywords

Transboudary hazardous waste, dumping, environmental justice, developing countries, Africa.

Introduction

It is estimated that from 2000–2010 alone, more than 600 million metric tons of hazardous wastes were generated globally.¹ A sizeable proportion of these hazardous wastes emanated from

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The data that exists is typically incomplete and inconsistent which renders time series comparison difficult if not speculative. See L. Pratt, 'Decreasing Dirty Dumping – A Reevaluation of Toxic Waste Colonialism and the Global Management of Transboundary Hazardous Waste' (2010) 35 William & Mary Environmental Law and Policy Review 581.

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industrialised nations.² Industrialised countries export hazardous waste to the developing world primarily for economic reasons.³ Strict environmental regulations have increased the cost of waste disposal in industrialised nations so richer countries move these hazardous wastes to the poorest nations.⁴ These nations are ever-willing to accept the waste even with its detrimental side effects for human health and the environment.⁵ This article argues that the Basel Convention seems to provide a basic legal framework within which global trade in hazardous waste can take place.

However, some key institutional improvements and far greater financial resources are urgently required if the Convention is to adequately safeguard the world's poor in the international trade of hazardous waste. This assistance requires technical transfer and capacity building in economically evolving countries given the consequences of wastes to human health and environment. Similarly, the Prior Informed Consent (PIC) procedure should be reformed to protect the developing world. This should be grounded in the recognition that the PIC procedure is inadequate in the context of north–south trade in hazardous waste.⁶ The implication is that Basel has the potential to promote environmental justice if the necessary reforms are made without a total ban on waste trade in the developing world.

The article is divided into six parts. Beyond the introduction, part two discusses the concept of environmental justice including the dumping of hazardous waste in the developing world, especially in West Africa. Part three examines the global framework on hazardous waste trade under the Basel Convention. It further discusses this through the lens of regional frameworks. Part four dwells on the domestic regimes. Specifically, under the domestic regimes, Nigeria and Ivory Coast in the context of West Africa are used to illustrate the environmental injustice in waste trade. Part five unveils how the Basel Convention can be reformed to promote environmental justice in the developing world without a total ban on waste trade. The conclusion both summarises and provides further suggestions.

Concept of environmental justice

The United States Environmental Protection Agency (EPA) defines environmental justice as the 'fair treatment and meaningful involvement of people of all races, cultures, and incomes regarding the

Z. Lipman, 'Trade in Hazardous Waste: Environmental Justice Versus Economic Growth' (2011). Available at: www.ban.org/ library/lipman.hml (last accessed 10 February 2016); K. Neill, 'Out of Backyard: The Problems of Hazardous Waste Management at a Global Level' (1998) 7 Journal of Environment and Development 138; B. Copeland, 'International Trade in Waste Products in the Presence of Illegal Disposal' (1991) 20 Journal of Environmental Economic and Management 143–162.

^{3.} Precisely, in 2006, 17 people died and over 80,000 individuals were forced to seek medical attention in Ivory Coast due to vomiting, nosebleeds, and other related ailments. This was the result of 500 tonnes of toxic waste that was dumped by Trafigura management in 14 sites around the city – primary sites near water and agricultural sources. See generally B. Mason, 'Toxic Waste Dumping in Ivory Coast' (2006). Available at: www.wsws.org (last accessed 7 February 2016); United Nation Office on Drug and Crime (UNODC), 'Transnational Trafficking and the Rule of Law in West Africa: A Threat Assessment'. Available at: www.unodc.org/ documents/data-and-analysis/studies/west_africa_report_2009.pdf (last accessed 4 February 2016).

M. Macleod, 'Transnational Trafficking of Hazardous Wastes from Developed to Developing Nations: Policies and Recommendations' (2013) 3(1) Interdisciplinary Journal of Health Sciences 1–2.

^{5.} The competition for crucial foreign revenue puts pressure on the governments of developing nations to consent to import wastes that they do not have the capacity to manage without incurring potentially disastrous harm to human health and environment. See J. Gaba, 'Exporting Waste: Regulation of the Export of Hazardous Wastes from the United States' (2012) 36 William & Mary Environmental Law and Policy Review 405; K. Kummer, 'The Basel Convention: Ten Years On' (1998) 7(3) Review of European Community and International Environmental Law 227, 228; K. Kummer, International Management of Hazardous Wastes (Clarendon Press: Oxford, 1995) 10.

^{6.} Basel Convention in art. 6 sets out the minimum requirements for PIC for the safe passage of wastes which include (a) Notification (b) Consent and issuance movement (c) Transboundary movement; and (d) Confirmation of disposal. See J. Albers, *Responsibility and Liability in the Context of Transboundary Movement of Hazardous Waste by Sea* (Springer 2014).

development and implementation of environmental laws, regulations and policies'.⁷ A fundamental concept of environmental justice is the idea that all people have both an equal right to live in a healthy environment and that environmental harm should be shared equitably among the social groups.⁸ This concept is usually analysed through the lens of social history of the person or the country where the definition is coming from. For example, in the United States, the EPA definition reflects its early beginning as a tool to fight frequent discrimination, inequality, denial of benefits including its negative effects to people of colour and the low-income populations.⁹

In the UK, the definition is summed up in a two-prong approach. The first is that the communities that may be more prone to pressure of environmental activities should not necessarily bear the disproportionate burden of environmental impact. The second is that every community should have equal access to justice including the ability to participate in decision of environmental issues that may affect them.¹⁰

In the African context, environmental justice paradigm prioritises the access to resources. Obiora encapsulates it as:

The equitable distribution of environmental amenities, the rectification and retribution of environmental abuses, the restoration of nature, and the fair exchange of resources. Its main insight challenges the uneven allocation of environmental risks as well as the benefits of environmental protection, industrial production and economic growth. Given its structural focus, the environmental justice struggle could be seen, not simply as an attack on environmental discriminations but as a movement to rein in and subject corporate and bureaucratic decision making, as well as relevant market processes, to democratic scrutiny and accountability.¹¹

On the whole, the foundational concept of environmental justice is premised on the human right to a healthy and safe environment, an equitable share of natural resources, the right not to suffer unfairly from environmental policies, laws and regulations including a reasonable access to justice, information and participation in decision making.

Environmental racism

The notion of environmental racism or injustice refers to any environmental policy, practice or directive that unfairly affects some individuals, groups, communities or countries which may be intentional or unintentional.¹² Chavis also defines environmental racism as, '... racial discrimination in the history of excluding

^{7.} In February 1993, Former President Clinton issued an Executive Order on environmental justice requiring all federal agencies to 'make achieving environmental justice part of its programmes, policies, and activities on minority and low-income populations in the United States'. See United States Environmental Protection Agency on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations 1994. Available at: www3.epa.gov/environmentaljustice/resource (last accessed 10 June 2016).

D. McLaren, 'Environmental Space, Equity and Ecological Debt' in Agyeman, Bullard and Evans (eds) Just Sustainabilities: Development in an Unequal World (Earth Scan: UK 2003).

^{9.} R. Ako, 'Nigeria's Land Use Act: An Anti-Thesis to Environmental Justice' (2009) 53(2) Journal of African Law 289-304.

National Environmental Justice Advisory Council (NEJAG), Meaningful Involvement and Fair Treatment of Tribal Environmental Regulations (2004) 5; G. Nwangwu, 'The Evolution of Environmental Justice and Trends: From Social Activism to Mainstream Movement' (2016) 6(6) *Journal of Environmental and Earth Science* 105–114.

^{11.} A. Obiora, 'Symbolic Episodes to the Quests for Environmental Justice' (1991) 21(1) Human Rights Quarterly 466-477.

^{12.} Environmental racism or injustice has been used interchangeably in this article. The practice of transnational movement of hazardous wastes in developing countries has been viewed as an environmental racism or injustice, but the movement which seeks to fight this injustice is called environmental justice. See generally E. Hull, 'Poisoning the Poor for Profit: The Injustice of Exporting Electronic Waste to Developing Countries' (2010) 21 *Duke Environmental Law and Policy* F 1; R. Bullard, *Confronting Environmental Racism: Voices from the Grassroots* (South End Press: Boston, 1993a) 20–32; H. Marbury, 'Global Environmental Racism' (1995) 28 *Vanderbill Journal of Transnational Law* 251, 293. R. Park, 'An Examination of International Environmental

people of colour from the mainstream of environmental groups, decision-making boards, and regulatory bodies'.¹³ Environmental racism is analysed from the three models which include the absence of political and economic power,¹⁴ eco-racism¹⁵ and neighbourhood principle.¹⁶ However, the form of environmental alism that seeks to fight this environmental racism or injustice is called environmental justice.¹⁷

The movement against environmental racism started from the United States and first got a domestic attention in 1982 when around 500 demonstrators were imprisoned following their protest for siting of a landfill in Warren County, North Carolina.¹⁸ The protest was a watershed and came as a result of a decision to include an estimated 330,000 cubic yards of polychlorinated biphenyl (PCB) in contaminated soil in landfill.¹⁹ Since then, a number of studies and theories in the United States and beyond have shown a link between a race, socio-economic status and the location of hazardous waste facilities.²⁰ Gerald Torres, Professor Bullard and Reverend Chavis all share the same idea that institutional racism remains the means by which environmental injustice is practised.²¹

Comparably, the export of hazardous wastes to developing countries appears to be the international equivalent of the disproportionate waste siting that occurs in the United States. This is because in both practices disadvantaged communities or countries bear uneven burden of industrialisation without having to receive most of its advantages.²² However, scholarly writings exist, which doubt the connection between waste dumping and racism. For instance, Professor Vicki Been argues that the research does not support the claim that racism and classism in the siting process itself is the cause of the disproportionate burden that poor and minority community bear in hosting locally undesirable land uses (LULU).²³ She maintains that events subsequent to siting may lead to current disproportion in the distribution of LULU.²⁴ Similarly, Gelobter pointed out that one needed to look at the statistical variables when studying environmental racism and hazardous waste-siting policies before drawing conclusions.²⁵

Furthermore, since the adoption of Basel and Bamako Conventions the concept of environmental injustice remains a suspect given that both the developed and developing countries are now exporters and

15. This concept argues that minority populations or countries are unfairly targeted for environmental injustices.

17. R. Bullard, Dumping in Dixie: Race, Class and Environmental Quality (Westview Press: Boston, 1994) pp. 10-20.

- V. Been, 'Locally Undesirable Land Uses in Minority Neighbourhood: Disproportionate Sitting or Market Dynamics?' (1994) 103 Yale Law Journal 1383, 1385.
- 24. V. Been, 'Analyzing Evidence of Environmental Justice' (1995) 11 Journal of Land Use and Environmental Law 1, 2.
- M. Gelobter, 'The Meaning of Urban Environmental Justice' (1993) 21 Fordham Urban Law Journal 841; D. Pellow, Resisting Global Toxics: Transnational Movements for Environmental Justice (MIT Press: 2007) 9–10.

Racism through the Lens of Transboundary Movement of Hazardous Wastes' (1997–1998) 5 Indiana Journal of Global Legal Studies 659,660.

B. Chavis, 'Foreword' to R. Bullard, in *Confronting Environmental Racism: Voice from The Grassroots* in Robert D. Bullard (ed.) (South End Press: Boston, 1993) 4–10.

^{14.} This model suggests that communities suffer from environmental inequity given that they do not have economic and political power.

This has to do with the dynamics of migration peculiarity among communities in the US and environmental injustice here is centred on economics. See generally R. Bullard, 'Solid Waste Site and Black Houston Community' (1983) 53(23) Sociological Inquiry 273–288.

D. Alston, 'Transforming a Movement: People of Color Unite at Summit against Environmental Racism' (1992) 21 Sojourner 30– 31.

^{19.} Ibid.

^{20.} See J. Albers, *Responsibility and Liability in the Context of Transboundary Movement of Hazardous Waste by Sea* (Springer: 2014).

R. Bullard, 'Race and Environmental Justice in the United States' (1993) 18 Yale Journal of International Law 319–335;
R. Bullard, 'The Threat of Environmental Racism' (1993) 7 Natural Resources and Environment 23–26, 55–56; G. Torres, 'Introduction: Understanding Environmental Racism' (1992) 63 University of Colorado Law Review 839, 840.

^{22.} Ibid.

importers of hazardous wastes. In essence, by adopting the Basel and Bamako, a global legal instrument has been established which provides an effective international instrument for the regulation of hazardous waste shipments that permits a State's sovereign the right to decide whether to ban or admit hazardous waste imports.

Dumping of hazardous waste in developing countries

Dumping of hazardous waste presents challenges to societies regardless of their sustainability awareness and technological advances.²⁶ However, it seems particularly troubling in developing countries given the lack of basic facilities to handle waste in environmentally sound manner (ESM). By far, the human and environmental consequences of such activities in developing world outweigh its economic benefits.²⁷

Dumping of hazardous waste gained global attention in 1986 and precisely in Koko, Nigeria, when an Italian national working in the country got a product import licence and replaced the shipment of several thousand tons of polychlorinated biphenyls, highly toxic and radioactive wastes which are both carcinogenic and toxic.²⁸ Even with the removal of wastes, the land within a 500-metre radius of the dump site was declared unsafe and the surface and ground water remained largely contaminated.²⁹ Similarly, a recent highly publicised dumping scandal that shocked the global community began in 2006, when a Dutch company called Trafigura left chemical waste in about a dozen sites around the poorest parts of Abidjan, Côte d'Ivoire.³⁰

L. Guerreco, G. Maas and W. Hogland, 'Solid Waste Management Challenges for Cities in Developing Countries' (2013) 33(1) Journal of Waste Management 220–232; L. Giusti, 'A Review of Waste Management Practices and their Impact on Human Health' (2009) 29(8) Waste Management 2227–2239.

R. Marshall and K. Farahbakhsh, 'System Approaches to integrated Solid Waste Management in Developing Countries' (2013) 33(4) *Journal of Waste Management* 988–1003; Oteng-Ababio, J. Arguello and O. Gabbay. 'Solid Waste Management in African Cities: Sorting the Facts from the Fads in Accra, Ghana' (2013) 39 *Habitat International* 96–104.

^{28.} It was estimated that more than 3,800 tonnes of this waste was stored on a site at Koko. Workers packing containers for their reshipment back to Italy suffered severe chemical burns. See C.U. Gwam, 'Human Rights Implications of Illicit Toxic Waste Dumping from Developing Countries Including the USA, Especially Texas to Africa, in Particular, Nigeria' (2012) 38 *T. Marshall Law Review* 241; F. Adeola, 'Environmental Injustice and Human Rights Abuse: The States, MNCs, and Repression of Minority Groups in the World System' (2001) 8(1) *Human Ecology Review* 39, 50; A Vir, 'Toxic Trade With Africa' (1989) 23 Environmental, Science and Technology Journal 24, 25.

^{29.} Similarly, Guinea-Bissau was offered a \$600-million-dollar contract which was four times its gross national product to dispose of 15 million tonnes of toxic waste over five years. Research in Asia revealed that Australia has been dumping lead batteries and other lead-related hazardous wastes in the Philippines, Thailand and India for purported recycling. It is estimated that between 1995 and 2000, more than 5.4 million metric tons of hazardous wastes were shipped to Bangladesh, China, Hong Kong and the Korean peninsula for recycling and disposal. See generally J. Baggs, 'International Trade in Hazardous Waste' (2009) 17(1) *Review of International Economics* 1–16; H. J. Marbury, 'Hazardous Waste Exportation: The Global Manifestation of Environmental Racism' (1995) 28 *Vanderbilt Journal of Transnational Law* 251, 291; Greenpeace, Lead Astray: 'The Poisonous Lead Battery Wastes Trade' *Greenpeace Report* 1994 p. 4; Greenpeace Media Release: 'Australia the Mucky Country-Hazardous Waste Trade Continues', *Green Report* 1997, P. 1.

^{30.} Reliable reports confirmed that 17 people died, and as of 2009, at least 100,000 people had sought medical treatment for ailments caused by these toxic chemicals. These results are not surprising: the substance turned out to be 500 tonnes of a mixture of fuel, caustic soda, and hydrogen sulphide. The company was turned away from several countries after leaving Amsterdam due to a hefty disposal charge, eventually partnering with a company in the Port of Abidjan. However, after several inquiries and a trial, Tra-figura struck a deal to pay €157 million in 2010. Generally see G. Cox, 'Trafigura Case and the System of Prior Informed Consent under the Basel Convention: A Broken System' (2010) 6 *Law Environment and Development Journal* 263; O. Fagbohun, 'The Regulation of Transboundary Shipments of Hazardous Waste: A Case Study of the Dumping of the Toxic Waste in Abidjan, Cote D' Ivoire' (2007) 37 *Hong Kong Law Journal* 831; L. Polgreen, and M. Simons, 'Global Sludge Ends in Tragedy in Ivory Coast' *New York Times* (2 October 2006) 10. Available at: www.bbc.co.uk/news/world-africa-197061663 (last accessed 12 June 2016).

Sadly, waste dumping has not met the same justice in the developing world whether in the environment or otherwise, and do not receive any attention until horrifying health concerns and other environmental issues begin to surface en masse.³¹ For instance, it appears that the infamous piracy and terrorism now plaguing the Somali coasts in the horn of Africa began as retaliation against foreign companies polluting the Somali's fishing waters.³² Continuous foreign toxic dumping has exacerbated an already bad socio-political environment for the Somali people that never had a central authority for many decades.³³ It is disheartening that foreign companies would clandestinely trade weapons for foreign waste, fuelling civil conflict.³⁴ It seems that the European and other industrialised countries' companies have been taking advantage of Somalia's strife, and its waters, for many years.³⁵

Another huge factor throughout the continent of Africa is the problem of e-waste or electronic pollution. This occurs when developed countries send their leftover used electronics to developing countries.³⁶ About a third of the materials that reach electronics markets in these countries are already damaged or broken beyond repair. Meanwhile, women and children search the scraps from the dump sites for whatever pieces they can find that may be valuable, amid all kinds of fumes from burning heavy metals and plastics.³⁷ The problem of dumping e-waste in Africa only exacerbates the insecurity brought on by conflict related to the extraction of minerals that feed into the initial production of the same electronics.³⁸ Given that consumerism in more industrialised countries has created destructive loopholes for the exploitation of African continent, it is not surprising that the continuous search for revenue to balance the trade deficits could facilitate such dumping of e-wastes.

Justifications for hazardous wastes trade

The economic argument seems to be the rationale behind the transboundary movements of hazardous wastes given the strict environmental regulations in developed countries. For instance, the logic of waste export paradigm was given an impetus by the Former World Bank Chief Economist Lawrence Summer when he issued a memo that 'health-impairing pollution should be dumped in the country with the lowest wages'.³⁹ While Summer and the World Bank might have recanted from this seemingly weak and

^{31.} See Gaba above n. 5 at 405.

^{32.} Waste dumping off the coast of Somalia came to light in 2004, when a tsunami dragged in multiple large containers of toxic chemicals that a foreign company had illegally dropped in the water some years before. The contamination of these coastal waters is troubling given that much of the population of Somalia relies on the fishing industry in this area for their livelihood. See M. Waldo, 'The Two Piracies in Somalia: Why the World Ignores the Other' (2009). Available at: www.wardheernews.com/Arti cles_09/Jan/Waldo/08_The_two_piracies_in_Somalia.html. (last accessed 20 March 2016).

^{33.} Ibid at 20

^{34.} Ibid at 21.

New Scientists, 'Toxic Waste adds to Somalia's woes'. Available at: www.newscientst.com/mg13518190.400-toxic-waste-addsto-somalias-woes.htm (last accessed 20 June 2016).

^{36.} See www.afjn.org/focus.../1073-hazardous-waste-dumping-in-africa.htm (last accessed 12 June 2016).

^{37.} E-waste contains valuable materials that may have an economic value when properly recycled. Unfortunately, the majority of e-waste is recycled in unregulated informal sector and results in significant risk of toxic exposures to the recyclers, who are frequently women and children. See D. N. Perkins, M. N. Drisse, T. Nxele and P.D.Sly, 'E-waste: A Global Hazard' (2014) 80(4) Annals of Global Health 286-295.

L. Bradley, 'E-Waste in Developing Countries Endangers Environment, Local' (2014). Available at: www.usnews.com/.../ articles/.../e-waste-in-developing-countries-endange- (last accessed 20 March 2016).

^{39.} Lawrence Summers' 1991 memo on trade liberalization was written by Lant Pritchett and signed by Lawrence Summers who was then Chief Economist of the World Bank. It included a section that both Summers and Pritchett say was sarcastic that suggested dumping toxic waste in 'third-world' countries for perceived economic benefits. See J. Jay, G. Pecquet and L. Taylor, 'Potential Gains from Trade in Dirty Industries: Revisiting Lawrence Summers' Memo' (2007) 27(3) *Cato Journal* (Cato Institute) 10–21.

uninspiring statement, the economic argument is still undeniably inferable.⁴⁰ For example, a research conducted in the 1980s and the 1990s revealed that the average disposal costs for one tonne of hazardous wastes in Africa were between \$2.50 and \$50, while in developed countries it ranged between US \$200–\$3,000.⁴¹ Undoubtedly, the lower cost of disposal in developing nations clearly reflects the high rate of poverty, poor environmental legislations and enforcement. There is also lack of political will and public oppositions owing to inadequate information and access to justice concerning the inherent dangers involved in hazardous trade.⁴² In what follows, the article examines the regulation of transboundary waste through the lens of international and regional frameworks.

Regulation of hazardous wastes under the Basel Convention

The international community has come to appreciate the necessity of regulating the dumping of hazardous waste because of its damaging implication to human health and environment.⁴³ From Basel⁴⁴ to the Rio Declaration⁴⁵ the effort to achieve a single practicable solution to hazardous waste import is still ongoing.⁴⁶ Global concerns about the shipments of hazardous wastes to developing nations led to the negotiation in 1989 that produced the Basel Convention which came into force in Basel, Switzerland in 1992.⁴⁷ The Convention does not expressly refer to the concept of environmental justice. However, its basis in ensuring the protection of human health and the environment in developing nations is a reflection of this principle.⁴⁸ More than 100 countries have ratified the Treaty and the ratification was top of the lists in Agenda 21 as one of the priorities in achieving sustainable development.⁴⁹ Agenda 21 emphasises the necessity of ensuring

- 43. The United Nations Conference on Human Environment, which met at Stockholm, Sweden from 5–16 June 1972, considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment. It is widely recognised as the beginning of modern political and public awareness of global environmental problems. The meeting agreed upon a Declaration containing 26 principles concerning the environment and development with an Action Plan with 109 recommendations, and a Resolution Principles of the Stockholm Declaration [here-inafter Stockholm Declaration]. See D. S. Elizabeth, *Global Environmental Institutions* (Routledge: New York, 2006) pp. 22–23.
- 44. One of the incidents which led to the creation of the Basel Convention was the Khian Sea waste disposal incident, in which a ship carrying incinerator ash from the city of Philadelphia in the US, having dumped half of its load on a beach in Haiti, was forced away where it sailed for months, changing its names several times unable to unload its cargo in any port. It ended up dumping much of it illegally at sea. Prior to Basel, the OECD established the Waste Management Policy Group to address international waste problems on three fronts: source reduction, material reclamation; and transportation and disposal of waste. See A. Andrew, 'Beyond the Ban Can the Basel Convention Adequately Safeguard the Interest of the World's Poor in International Trade in Hazardous Waste' (2009) 5(2) *Law and Environment Development Journal* 167, 169–170; Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (1989) 28(3) ILM 652, 657 [hereinafter Basel Convention].

^{40.} N. Pellow, Resisting Global Toxics: Transnational Movements for Environmental Justice (MIT Press, 2007) p. 9.

^{41.} A further recurring complaint in criticisms of Summers' memo is that exporting hazardous wastes to developing nations would obviously shorten the lives of poorer people. However, statistical evidence suggests that these effects are highly unlikely given the current risks they face. See T Lenard and C Straehle (ed.), *Health Inequalities and Global Justice* (University of Edinburgh Press, 2012) Ch 2; M. Hausman, and M. McPherson, *Economic Analysis, Moral Analysis, and Public Policy* (Cambridge University Press: New York, 2006) 23.

See A. Webster-Main, 'Keeping Africa Out Of the Global Backyard: A Comparative Study of the Basel and Bamako Conventions' (2002) 26(1) Environs: Environmental Law and Policy 63, 68.

^{45.} Rio Declaration on Environment and Development UN.Doc A/Conf.15/25/Rev 1 reprinted in 31 (1992) ILM 874.

^{46.} Ibid.

^{47.} J. Baylis and S. Smith, The Globalization of World Politics (3rd edn, Oxford University Press: Oxford, 2005) pp. 454-455.

^{48.} See Basel Convention, above n. 44 at 10.

^{49.} Agenda 21 is a non-binding, voluntarily implemented action plan of the United Nations on sustainable development. It is a product of the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro Brazil in 1992. It is an action agenda for the UN and other multilateral organisations including the individual governments around the world that can be executed at local,

effective control of the generation, storage, treatment, recycling, transportation and disposal of hazardous wastes for proper health and environmental protection, natural resource management and sustainable development.⁵⁰ For instance, Principle 14 highlights the need by state parties to cooperate to prevent environmental dumping of wastes to achieve environmental equity.⁵¹

The original text of Basel Convention does not contain a complete ban on transnational shipments of hazardous wastes but merely seeks to control and limit the movements of the wastes, so that recycling and disposal are compatible with human health and the environment.⁵² The Convention was amended in 1994 to impose a complete ban on hazardous wastes exports from OECD to non-OECD nations.⁵³ However, this amended provision to ensure a total ban which is yet to come into force is a significant development from the original text of the Convention and has been described as 'a striking victory for global environmental justice'.⁵⁴ Though, some industry players and even the US Government have been less excited about the decision.⁵⁵ However, regarding ship-scrapping wastes, the International Maritime Organization (IMO) is currently negotiating a legally binding instrument for the safe and environmentally sound recycling of ships.⁵⁶ The US has urged Basel Parties to co-ordinate internally between maritime and environmental components of government, and participate actively in IMO negotiations to achieve environmentally sound management of ship recycling.⁵⁷

Scope and Obligations of Basel Convention

Under Basel, hazardous wastes include, *inter alia*, 'wastes that belong to any category which is contained in Annex I unless they do not possess any of the characteristics found in Annex III⁷.⁵⁸ Annex I provides two categories of waste to be controlled which include hospital wastes and pharmaceutical wastes, waste from organic solvent, polychlorinated biphenyl (PCB) and adhesives.⁵⁹ The second category views waste in terms of its constituents which include lead, mercury and asbestos.⁶⁰ Annex II covers household waste and ash from the incineration.⁶¹ Annex III includes explosives, flammable liquids and solids, substances prone

national, and global levels. The '21' in Agenda 21 refers to the twenty-first century. It has been affirmed and modified at subsequent UN conferences.

50. See Rio Declaration, above n. 45 at 23.

- 52. See Basel Convention, above n. 44 at 10.
- 53. S. Westervelt and W. Beckham, 'Externalizing the Costs of Hazardous Waste from the United States' (2014) 16 Vermont Journal of International Law 636.
- 54. J. Knox, 'United States, Environmental Agreements, and the Political Question Doctrine' (2014) 40 NCJ Int'l L. & Com. Reg 933.
- 55. Ibid; the US Chamber of Commerce previously withdrew its support for the Basel Convention and the Clinton administration slowed its ratification efforts.
- See International Maritime Organization, 'Implications of the United Nations Convention on the Law of the Sea for the International Maritime Organization' LEG/MISC.719 January 2012.
- 57. Some Basel Parties are beginning to argue that the Convention applies, in its current form, to the international movement of used products for repair, refurbishment, or remanufacture. The US position is that international movement of equipment for repair, refurbishment, or remanufacturing does not constitute movement of waste, and thus is not impacted by the Convention or its procedures. In terms of classifying used and scrap electronics, the current Basel system for controlling international shipments of hazardous waste makes trade in many of these materials difficult; and in some cases impossible. The US supports consideration of alternative systems of control for 'e-waste' under the Convention. See M. Bradford, 'The United States, China and the Basel Convention on the Transboundary Movements of Hazardous Wastes and their Disposal' (2011) 8(2) Fordham Environmental Law Journal 1–47.
- 58. See Basel Convention, above n. 44, art 1.
- 59. Ibid.
- 60. Ibid, arts 1, 2.
- 61. Ibid, art 2.

^{51.} Ibid at 30.

to spontaneous combustion, toxic and ecotoxic.⁶² Similarly, wastes may also be termed hazardous if it is embodied as such in national laws of the importing, exporting and transit countries.⁶³ Radioactive waste and waste from ships are excluded from the scope of the Convention since they are covered by other international legal instruments.⁶⁴

Regarding the obligations, Basel imposes a number of duties to state parties to protect the developing countries. Some of the major obligations include: the duty to recognise and observe the rights of states to prohibit the import of hazardous wastes.⁶⁵ There is a right to prohibit the export or import of hazardous wastes to or from a non-party.⁶⁶ The duty to permit the movement of waste only where the state of export does not have the technical capacity or facilities to dispose of the waste in an environmentally sound manner unless it is required as a raw material for recycling in the state of import.⁶⁷ There is a duty to obtain the prior informed consent of the importing country and each of the states of transit before the transboundary movement.⁶⁸ Also, there is right to impose criminal sanctions where illegal trafficking in hazardous waste is found, but it lacks enforcement power.⁶⁹

Weaknesses of Basel Convention

First, while many advanced nations have ratified the Convention, the US, which remains the largest global generator of hazardous waste, accounting for almost three-quarters of total annual production is yet to incorporate the Convention into its national law.⁷⁰ To ensure environmental justice in developing nations, the participation and co-operation of the US as one of the global generators in waste trade is crucial.⁷¹ Secondly, the Convention lacks a proper enforcement mechanism to ensure that waste traders are fully accountable for damage which occurs. This weakness impacts on Basel's potential to attain environmental justice in developing countries. However, this problem is partly being addressed by the development of a Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal.⁷²

Third, the generality of the definition of the 'hazardous wastes' has been criticised for being too broad and uncertain, which leaves it open to interpretation by parties. For instance, a party can argue that exports are 'products' and not 'hazardous waste'.⁷³ To clarify this problem, the Basel Technical Group came up with three lists of waste. The A-listed waste is characterised as hazardous for the purposes of Basel Convention.⁷⁴ B-listed waste is not characterised as hazardous under the Treaty, except where it contains Annex I material to an extent that causes them to assume the hazardous requirements listed in Annex III.⁷⁵

- 65. Ibid, art 4.1(a), (b), (e).
- 66. Ibid, art 4.5.
- 67. Ibid, art 4.9.
- 68. Ibid, arts 6 and 7.

^{62.} Ibid, arts 1, 2, 3.

^{63.} Ibid, art 1.1(b).

^{64.} Ibid, art 1.3.

^{69.} Ibid, art 9.5.

^{70.} See Bradford, above n. 57 at 4.

T. Yang and C. Fulton, 'Breach Avoidance or Treaty Avoidance?: The Problem of Over-compliance and US Ratification of the Basel Convention on Hazardous Wastes' (2015) Santa Clara University Legal Studies Research Paper 1–15.

^{72.} For meaning of damage and financial limit for liability under this, see Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal 1999, arts 1–12.

^{73.} See Basel Convention, above n. 44, arts 4, 6, 7, 9.

^{74.} Ibid, arts 4, 6.

^{75.} Ibid, arts 7, 9.

The status of C-listed waste is still unclear.⁷⁶ Both A and B lists were incorporated as two new annexes to the Convention.⁷⁷ The adoption of the lists is an important step in tightening up control on the export of hazardous waste in developing countries.

Still on Basel, the adoption of a limited instead of a total ban in the original text was as a result of the compromise of the two controversial views. Developing countries supported a total ban on the international movement of hazardous waste which is opposed by the industrialised nations.⁷⁸ In essence, the opposition is as a result of the fact that such a move would be economically disadvantageous.⁷⁹ Given the disagreement, a limited ban was adopted and global movement of wastes between parties to Basel Treaty is allowed only where the exporting state does not have the technical capacity and the essential facilities to dispose of the waste effectively.⁸⁰ Similarly, wastes trade can be permitted where they are required as a raw material for recycling or recovering industries in the state of import.⁸¹ The Convention permits a state party to negotiate bilateral, multilateral and regional treaties with a non-party with an exception that environmental sound management would not be derogated.⁸² Transnational movement of wastes which are allowed under restricted ban are subject to the 'prior informed consent' provision.⁸³ These provisions require the exporting country to obtain the consent of importing country and other nations in transit routes before shipments.⁸⁴

Aarhus Convention

A related framework which emphasises environmental justice is the Aarhus Convention, which applies only in the European Union (EU) and Central Asia.⁸⁵ The Aarhus Convention grants the public rights regarding access to information, public participation and access to justice in governmental decision-making processes on matters concerning the local, national and transboundary environment.⁸⁶ This Convention is remarkable for being able to link environmental justice with human rights for the protection of the future generation,⁸⁷ evident by its reference to access to justice and information including public participation.⁸⁸ Nevertheless, Aarhus can be criticised for failing to link environmental justice with hazardous wastes in local, national or international arenas. Moreover, the Convention lacks a proper international enforcement bodies including compliance mechanisms. This is evident given that it provides only that the parties 'shall establish, on a consensus basis, optional arrangements of a non-confrontational, non-judicial and consultative nature for reviewing compliance'.⁸⁹ This seems to be one of the weakest compliance sections of all known international agreements to date.

80. See Basel Convention, above n. 44, art. 4.9(a).

- 84. Basel Convention above n 44, arts 6 and 7; Rio Declaration, above n. 45, Principle 19.
- See Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters at Aarhus, Denmark, on 25 June 1998 [hereinafter Aarhus Convention].

^{76.} Ibid, arts 4, 6, 7.

^{77.} Ibid, arts 4, 6, 7, 9.

A. Andrews, 'Beyond the Ban – Can the Basel Convention Adequately Safeguard the Interests of the World's Poor in the International Trade of Hazardous Waste' (2009) 5 *Law Environment and Development Journal* 167.
Ibid.

^{81.} Ibid, art. 4.9(b).

^{82.} Ibid, art. 11.

D. Langlet, Prior, Consent and Hazardous Trade: Regulating, Trade in Hazardous Goods at the Intersection of Sovereignty, Free Trade and Environmental Protection (Kluwer Law International: The Netherlands 2009).

B. Toth, 'Public Participation and Democracy in Practice – Aarhus Convention Principles as Democratic Institution Building in the Developing World' (2010) 30 Journal of Land Resources and Environmental Law 295.

^{87.} Aarhus Convention above n. 85, arts 4–9.

^{88.} Ibid.

^{89.} Ibid, art. 15.

Furthermore, by its refusal to permit Article 9(3) of the Aarhus Convention as a reference criterion for the purpose of reviewing the EU's compliance with the Aarhus Convention's obligations, the Court of Justice in the EU has avoided tackling the unsatisfactory level of judicial protection in environmental cases at both EU level and beyond.⁹⁰ It is argued that, rather than curtailing the current failings of the EU with respect to access to justice in environmental cases, the failing has paved the way for yet another decade of non-compliance by the EU in the realm of access to justice in environmental cases.

Lome IV Convention

Lome IV Convention was adopted in 1990 between European Community, African, Caribbean and Pacific (ACP).⁹¹ The revolutionary aspect of this Treaty is its total ban of hazardous waste export to ACP states regardless of whether the waste originates in EC member states.⁹² The Bamako Convention, while sharing the Lome IV policy goal of protecting African nations, is broader in scope and more specific than the Lome IV Convention.⁹³

Comparing Basel with Bamako

Given the barrage of criticisms that greeted the restricted ban on shipment of hazardous waste under Basel, the Organization of African Unity (OAU) (now African Union (AU)) passed a resolution in 1988 declaring the dumping of the nuclear and hazardous wastes in the entire continent of Africa to be a crime against Africans and African people.⁹⁴ The preambles to both Basel and Bamako advocate environmental justice by ensuring that human health and the environment are protected in transboundary movement of hazardous wastes.⁹⁵ However, remarkable distinctions still exist between the two Conventions. First, Bamako completely prohibits all hazardous waste imports into Africa⁹⁶ including the importation of

^{90.} H. Schoukens, 'Access to Justice in Environmental Cases after the Rulings of the Court of Justice of 13 January 2015: Kafka Revisited?' (2015) 31(81) Utrecht Journal of International and European Law 46–67; M. Hedeman-Robinson, 'EU Implementation of the Aarhus Convention's Third Pillar: Back to the Future over Access to Environmental Justice?–Part 1' (2014) 23(3) European Environmental Law Review 102, 111.

^{91.} The Lome Convention is an international aid and trade agreement between the ACP (African, Caribean and Pacific Countries) group and the European Union which aimed to support the 'ACP states' efforts to achieve comprehensive self reliant and self-sustained development'. The Lome IV covers the period from 1990– 2000 and is the most extensive development cooperation agreement between North and Southern countries both in terms of scope (aid and trade) and the number of signatories. The convention states that ACP cooperation is to be based on partnership, equality and solidarity including mutual interest. Lome IV covers a broad range of sectors eligible for support under the development finance cooperation which included but not limited to the environment, agriculture, food security and rural development. See The Fourth African, Caribbean and Pacific States-European Economic Community Convention of Lome 1990, 29 ILM 783 [hereinafter Lome IV Convention].

^{92.} Ibid.

^{93.} Ibid.

^{94.} The Bamako Convention is a response to Article 11 of the Basel Convention which encourages parties to enter into bilateral, multilateral and regional agreements on hazardous waste to help achieve the objectives of the convention. The impetus for the Bamako arose also from the failure of Basel to prohibit trade of hazardous waste to less developed countries (LDCs). Furthermore, the realisation that many developed nations was exporting toxic wastes to Africa (Koko case in Nigeria, Probo Koala case in Ivory Coast). The Bamako Convention was adopted in 1991 and came into force in 1998. See Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes (1991) 30 ILM 773 (1991) [hereinafter Bamako Convention].

^{95.} See the Preambles to Basel and Bamako which emphasises environmental justice.

^{96.} See R. Shearer, 'Comparative Analysis of Basel and Bamako Conventions on Hazardous Waste' (1993) 23 Envt'L'L 141,144.

wastes for use in recycling which is frequently used as a loophole under Basel by both state parties and non-state parties.⁹⁷

Nevertheless, it permits minimal movement of wastes among African countries; Basel does not make such distinction.⁹⁸ Second, given the fears that the administrative framework of the Basel Convention is not strong enough, a competent authority, a focal point and a dump watch was provided in the Bamako Treaty to handle administrative work and to monitor and report the dumping of the wastes. Though both Conventions require competent authorities and a focal point to be designated by state parties, Basel lacks the additional monitoring system created by the dump watch in Bamako.⁹⁹ Third, Bamako explicitly prohibits the dumping of hazardous wastes in the sea or internal water.¹⁰⁰ This does not appear to be the case in Basel.¹⁰¹ The purpose of this is to prevent a repeat of the incidents such as that of the Khian Sea in which a ship that was contracted to dispose of Philadelphia's incinerator ash remained at sea as no nation would accepted the wastes, most of which were 'lost' in the Indian Ocean, thus endangering human health and the environment.¹⁰²

Moreover, Bamako provides for unrestricted joint and several liability against the generators of this improper waste. This provision permits the imposition of whatever damages are considered proper in the circumstances, including punitive damages. However, given the irreconcilable differences between developed countries and developing nations, Basel fails to incorporate the requisite mechanism for applying liability against the generators of hazardous wastes.¹⁰³ Furthermore, Bamako imposes much higher standards than those found in Basel given its requirement for a 'preventative, precautionary approach'.¹⁰⁴ which specifically rejects the less strict 'permissible emissions approach'.¹⁰⁵ The preventative and precautionary approach bans the release of potentially harmful substances even without scientific evidence of harm, while the permissible emission standard permits the release of any toxic wastes until its designated threshold is reached.¹⁰⁶ However, Basel merely demands a reduction in the level of hazardous wastes generation in respect of social, technological and economic factors.¹⁰⁷ In other words, the standard in Basel is less

M. Jeffrey, 'Exporting Waste: Regulation of the Export of Hazardous Wastes from the United States' (2012) 36 (405) William & Mary Environmental Law and Policy Review.

^{98.} B. Chaytor and K. Gray, International Environmental Law and Policy in Africa (Springer: Science & Business Media, 2013)

L. Pratt, 'Decreasing Dirty Dumping-A Reevaluation of Toxic Waste Colonialism and the Global Management of Transboundary Hazardous Waste' (2010) 147 Texas Environmental Law Journal 41.

^{100.} See Bamako Convention, above n. 94, art. 4.

^{101.} See the Amended Protocol of Basel 1995 that seeks to impose a complete ban.

^{102.} J. Sawyer, 'Haiti Seeks Removal of US Waste' St. Louis Post Dispatch (12 May 1999) 1.

^{103.} See Bamako Convention above, n. 94, art. 4(3)(b); See I. Wani, 'Poverty, Governance, the Rule of Law and International Environmentalism: A Critique of the Basel Convention of Hazardous Wastes' (1991) 1 Kansas Journal of Law and Public Policy 3, 40–45.

^{104.} See Sawyer, above n. 102 at 5.

^{105.} Precautionary principle encourages policy makers to take action when there are possible harmful effects of certain products and activities on the environment or human health, without waiting for conclusive scientific evidence. See J. Tosun, 'Perspectives on the Precautionary Principle' In *Risk Regulation in Europe* (Springer: New York, 2013) pp. 39–50.

^{106.} See Bamako Convention, above n. 94, art. 4.3(f). The Bamako Convention incorporates both the precautionary principle which permits action to prevent pollution releases in the absence of total scientific proof that environmental harm may result. It also requires a commitment to actions and measures to support and promote cleaner production technologies. Unlike Basel, Bamako implements the preventive, precautionary approach to pollution problems and cooperates with other parties in the application of clean production methods, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions. In other words, Contracting Parties should carefully select industrial processes and technologies which have the lowest possible potential to cause pollution rather than establishing technologies that require a 'license to pollute' and then try to calculate how much pollution the local environment and population can tolerate.

^{107.} Bamako Convention, above n. 94, art. 4(2)(a).

stringent when compared to Bamako given that it does not require pollution precaution technology that may exceed a nation's technological and economic capabilities.

In summary, Bamako can be criticised from an economic standpoint given that in a bid to impose a ban on wastes movements across borders, it appears to have stifled the economic activities in hazardous trade emanating outside the continent. This article posits that minimal waste trade should be permissible where a developing country certifies the required technical competence backed by the presence of requisite facilities for recycling and disposal. In what follows, the article discusses the domestic frameworks relating to hazardous waste in developing countries. Nigeria and the Ivory Coast are used as illustrations.

Domestic Regimes – Nigeria

The Koko incident of 1986 was a rude awakening for the Nigerian Government as to the environmental consequences of toxic waste exposure and the imperative need to safeguard against it. The Nigerian Government enacted a statutory provision with a specific object of prohibiting the carrying, depositing and dumping of hazardous wastes on any land, territorial waters and matters relating thereto.¹⁰⁸ The offences of dumping are committed by the carrying out of any act or omission stated in the Act.¹⁰⁹ The Act focuses mainly on criminal prosecution; it does not make adequate provisions for victims of the damage.¹¹⁰

With respect to the victims of damage, the Nigerian Constitution lacks the requisite power desperately needed in environmental protection. The only provision dealing with the environment falls under the non-justiciable umbrella of the Fundamental Objectives and Directive Principles.¹¹¹ In light of this deficit, persons or groups affected by environmental issues are denied critical constitutional weapons in their armory.¹¹² It is argued that environmental protection cases should be interpreted by the courts as justiciable to protect those affected by environmental issues. However, this success can only be attained if the Nigerian courts take their cue from other countries including Ghana, South Africa and India, where the courts have applied their interpretative jurisdictions to activate justiciable life into their Fundamental Objective and Directive Principles.¹¹³

It is further suggested that owing to a lack of resources required to prosecute these types of cases, the use of Non-Governmental Organisations (NGOs) to represent a prospective litigant may be preferable. These agencies are in a better financial position to bring an action on behalf of the victims through human rights provisions.¹¹⁴

^{108.} It was estimated that more than 3,800 tonnes of these wastes were stored on a site at Koko in Nigeria. Workers packing containers for reshipment of the wastes back to Italy suffered severe chemical burns. See C. Gwam, 'Human Rights Implications of Illicit Toxic Waste Dumping from Developing Countries Including the USA, Especially Texas to Africa, in Particular, Nigeria' (2012) 38 *T. Marshall Law Review* 241.

^{109.} See the Nigerian Harmful Waste (Special Criminal Provision) Act 1988, s. 6. The Act provides a very stringent sentence of life imprisonment and in addition the forfeiture of any aircraft, vehicle or land connected with or involved with the violation of the provisions.

^{110.} Ibid. ss 7–12; C. Nwufo, 'Legal Framework for the Regulation of Waste in Nigeria' (2010) 4(2) African Research Review 491–501.

^{111.} See Constitution of Federal Republic of Nigeria 1999 (as amended), s. 20.

^{112.} Ibid.

^{113.} S. Gozie, 'Environmental Protection in Nigeria: Two Decades after the Koko Incidents' (2009) 15(1) Annual Survey of International & Comparative Law Article 2.

^{114.} For the use of the NGO to enforce environmental justice through human rights provisions, see the Ruling in SERAP v. Nigeria Suit No: ECW/ CCJ/ APP/08/09 and RUL No: ECW/CCJ/ APP/07/ 10 at www.worldcourts.com.ecowasccj/enj/decision/2010/ (last accessed 20 June 2016). See E. Ekhator, 'Improving Access to Environmental Justice under the African Charter on Human and Peoples' Rights: The Roles of Ngos in Nigeria' (2014) 22(1) African Journal of International and Comparative Law 63–79;

Ivory Coast

As already stated, poverty, including a lack of economic power, remains the key reason developing countries have been lured into accepting certain substances. This poverty is encouraging waste export in West Africa - in some cases the fees for trade in hazardous wastes 'rivals the African nations' annual gross national product'.¹¹⁵ To further buttress this argument, the Ivorian Government launched an investigation after the Dutch company Trafigura dumped tonnes of waste at different sites.¹¹⁶ While the result of the criminal investigations in Côte d' Ivoire were still being awaited, Trafigura paid \$157 million in compensation and the Ivorian Government dropped all charges relating to financial claims.¹¹⁷ While this deal might seem to be tempting, the moral question remains: why would the authorities accept the dumping of wastes in the Ivory Coast given that the country lacks the technical competence and essential facilities to handle them in an environmentally sound manner? Why would the country accept money and shield the company from criminal prosecution and possible culpability? It is the considered view of this article that what the government of Côte d' Ivoire did was and will continue to remain a threat to the usefulness of the Conventions such as Basel and Bamako, including the general principles of international law. In essence, by accepting financial inducement from the Dutch company in lieu of possible criminal liability, it has certainly encouraged future perpetrators to dump toxic, dangerous products and wastes in the horn of Africa. Furthermore, such action would impact negatively on the effectiveness of the remedies for individual victims under the Conventions.

Impact of Basel on environmental justice

The section discusses how Basel can be reformed to promote environmental justice by strengthening the weaker provisions of the Convention to protect the poorest countries. Despite its shortcomings, Basel enforces the principles of environmental justice. First, the preamble to the Treaty, which emphasises the objectives and concerns underlying the parties' desire to formulate the Convention makes reference to human health and the environment. In 15 of its 24 clauses it states that ' . . . parties are determined to protect, by strict control, human health and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes'.¹¹⁸

In like manner, the Convention enjoins Member States to co-operate with one another so as to 'improve and achieve' the environmentally sound management (ESM) of hazardous and other wastes. In other words, by defining ESM as 'taking all practicable steps' to manage wastes in manner consistent with protecting human health and environment, the Treaty approves a policy that protects human health and the environment. In essence, every Member State is now required to submit to the Secretariat of the Convention a list of any additional wastes it considers hazardous and any procedure it imposes on wastes to reduce their risk.¹¹⁹ Basel seeks procedural justice by not only prioritising human health and environment but also, in ensuring that the definitions imposed by the Convention are a floor, not a ceiling, by

E. Ekhator and K. Ajibo, 'Agriculture and human rights: Legal and theoretical assessment of the right to food in Nigeria' in Rhuks .T. Ako and Damilola S. Olawuyi *Food and Agricultural Law: Readings on Sustainable Agriculture and the Law in Nigeria* (Afe Babalola University Press: Nigeria, 2015) Chapter 9.

^{115.} See UNEP /CHW.8? INF/7* of 13 Nov 2006, see Report on Action taken by the Basel Convention Secretariat in Response to the incident of Dumping of Toxic Wastes in Abidjan.

^{116.} Ibid; the registered owner of MV Probo Koala is Celtic Legend Shipping Inc of Norway while the beneficial owner (and manager and operator) is Prime Marine Management of Athens, Greece. The Probo Koalo was chartered by Trafigura Beheer BV.

^{117.} Ibid.

^{118.} See Basel Convention, above n. 44, Preamble.

^{119.} Ibid. art. 3(12).

permitting states to impose much stricter legislation on waste movements based on choices and abilities in their national laws.¹²⁰

Differential treatment given to developing nations in Basel attempts to offer a protective measure which gives importing countries the right to limit the importation of hazardous wastes into their territories for any reason. This requires exporting countries to prohibit waste movement in the absence of express consent by an importing nation.¹²¹ By permitting a complete right of refusal to developing nations, the Convention sought to ease some of the pressure they felt to accept the wastes despite the fact that they lacked the infrastructure to manage those wastes in an environmentally sound manner. Similarly, differential treatment in Basel codifies procedural justice by authorising developing countries to have the final say in hazardous wastes shipments; this reduces the danger of environmental burdens being borne by nations less technically and financially equipped to handle them.¹²²

The regulatory system is the bedrock of the Basel Convention as originally adopted.¹²³ Based on this, the concept of prior informed consent requires that, before any export takes place, the authorities of the State of export notify the authorities of the prospective States of import and transit, providing them with detailed information on the intended movement.¹²⁴ The movement may only proceed if and when all States concerned have given their written consent.¹²⁵ This procedure was designed to safeguard state sovereignty and to balance the environmental developmental policies in accord with the Rio Declaration.¹²⁶ However, the incident in Ivory Cost previously discussed, shed more light on the inadequacy of PIC procedures in developing countries.

First, the problem with self-verification in Basel remains inconclusive. While on the face of it, Basel mandates the country of exports to certify that sufficient waste treatment facilities are provided in the states of import, the practical reality is that no satisfactory measures are in place to monitor this procedure. It is argued that through connivance or otherwise, the state of export can easily accept any representation made by the state of import even when it may fall short of that required in the Basel Convention. What is required here is an independent assessment on case-by-case basis of the treatment facilities in both the country of import and export.

Secondly, the domestic regimes of the country of import need to be strengthened to deal with those who violate hazardous waste practices. The issue of the Basel Convention in international law remains unsettled in terms of being a self-executing treaty or whether it requires domestication through the enabling national legislations.¹²⁷ However, it is necessary that both the legal and institutional frameworks of the state of import are adequate for prompt enforcement. The problem remains that in low-income countries the effectiveness of these regulatory regimes is undermined by the immense pressure from both corporate and government interests given the resources at their disposal. This is further compounded by the deliberate refusal to prosecute such issues by allegedly 'corrupt' officials.

Thirdly, the effectiveness of PIC is dependent on sufficient disposal facilities in the country of import. This disposal infrastructure must meet the Environmental Impact Assessment procedure.¹²⁸ This requires all party

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^{120.} Ibid.

^{121.} Ibid, arts 6, 7.

^{122.} Ibid.

^{123.} Ibid, art. 6

^{124.} Ibid

^{125.} Ibid, art. 7

^{126.} See Rio Declaration above n. 45, Principle 2.

^{127.} Ivory Coast is a monist state which means that an act ratifying a treaty immediately incorporates it into national law. However, domestic regulation may be required for application. See A. Cassese, *International Law* (2nd edn, Oxford University Press: Oxford 2005) 220–221; K. Ajibo, 'Facing the Truth: Appraising the Potential Contributions, Paradoxes and Challenges of Implementing the United Nations Conventions on Contracts for the International Sale of Goods (CISG) in Nigeria' (2013) 2(1) *Journal of Sustainable Development Law and Policy* 175–189.

^{128.} See Rio Declarations above n. 45, Principles 17 and 19.

to evaluate the potential risks and make an informed decision regarding trade in hazardous wastes.¹²⁹ Where these arrangements are not in place and wholly functioning, it is doubtful whether the domestic management of hazardous waste in the state of the import can ensure that human health and environment is protected. In other words, unless Basel is urgently amended to tighten the loopholes in the PIC procedure, low-income importing states could mistakenly or deliberately certify that their domestic facilities are adequate for waste treatment and disposal even when such standard would be unacceptable in the developed world. The Transfigura incident in the Ivory Coast showed how, without an adequate PIC infrastructure, local officials could buckle under pressure.

Moreover, Basel Convention Regional Centres (BCRCs) have been established to provide technological assistance to developing nations. The Convention seeks to create environmental justice by easing environmental burdens in the developing world by training these regions to handle hazardous wastes so that they can reduce environmental harm. So far, more than 15 regional centres have been established in developing world.¹³⁰ However, it is argued that their effectiveness has been impeded by inadequate funding, a view that has been further corroborated in a report by the UN Human Rights Council Special Rapporteur.¹³¹ This emphasises the need to provide technical support to develop norms and regulations and to eliminate loopholes at the national level with the overall objective of enhancing capacity to monitor and control transboundary hazardous wastes.

Furthermore, the Protocol on liability was adopted after Fifth Conference of Parties (COP-5) which aims to respond to the concerns over lack of funds to cope with illegal dumping or accident spills.¹³² It is the first framework in international environmental law that promises to assign liability as well as provide for adequate and prompt compensation for injuries resulting from hazardous wastes trades.¹³³ The Treaty requires ratification by 20 parties to be enforced.¹³⁴ When this ratification is attained, it could have the potential to impose a strict liability and fault-based principle against the violators of hazardous wastes in the international plane.¹³⁵ In essence, this could trigger the implementation of the 'polluter pays' principle in the Basel Convention.

Conclusion

This article has argued that the Basel Convention has the potential to attain environmental justice by strengthening its weaker provisions to protect developing countries from bearing the major burden of

^{129.} See The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade 2001; M. Nagai, 'National Implementation of International Prior Informed Consent Procedures Concerning the Hazardous Chemicals and Wastes' (2004) 4 Sustainable Development and Policy 23.

^{130.} Basel Convention above n .44, art. 14.

G. Cox, 'The Trafigura Case and the System of Prior Informed Consent under the Basel Convention – A Broken System?' (2010)
6(3) Law, Environment and Development Journal 236.

^{132.} See the report of the third meeting of the Expanded Bureau of the Seventh Meeting of the COP 6–7 October, 2006 (document UNEP /SBC/BUREAU/7/3/16). See O. Tung, 'Transboundary Movements of Genetically Modified Organisms and the Cartagena Protocol: Key Issues and Concerns' (2014) 17(5) Potchefstroomse Elektroniese Regsblad 1740–1787.

K. Kohm, 'Shortcomings of the Cartagena Protocol: Resolving the Liability Loophole at an International Level' (2009) 27 UCLA Journal of Environmental Law and Policy 145.

^{134.} Ibid.

^{135.} The groundbreaking decision, containing a set of measures aimed at strengthening international control of transboundary movements of hazardous wastes, was adopted on 21 October 2011, the 10th Meeting of the Conference of Parties to the Convention (COP10), in Cartagena de Indias, Colombia. The ground for the breakthrough is to improve the effectiveness of the Basel Convention. It clarifies the interpretation of Article 17(5) of the Convention, setting the bar for entry into force of the Ban Amendment. The amendment will enter into force once an additional 17 parties ratify it. See www.basel.int/copidtabid/1571/ Default.aspx (last accessed 27 June 2016).

environmental harm without a total ban on hazardous wastes trade. As indicated previously, the loophole on the PIC procedure, currently enabling misrepresentation by parties regarding ESM practices, should be closed by using the facility from developing countries upon prior inspections and authorisation by an independent body. The effectiveness of PIC depends on adequate hazardous waste disposal infrastructure in the country of import. However, for PIC to be effective, it must meet the sound Environmental Impact Assessment (EIA) standard. This requires weighing the potential risk and the ability to make an informed decision by the importing country. State parties need to ratify and implement the currently ineffectual yet promising protocol on liability into force given that it has the potential to deter illegal wastes movement. More capacity building and technological facilities through funding sources should be established to support the Basel Convention Regional Centres (BCRC) projects. The funding pattern should adopt a co-operative approach to impose strict penalties against the violators of these regimes similar to the Kyoto Protocols Compliance Committee.¹³⁶ The Basel ban on all exports to non-Annex VII nations should be modified so that they only apply until a developing nation can establish a facility able to pass inspection and receive a permit certifying ESM practices.¹³⁷ The burden developing countries may have incurred when previously accepting hazardous waste would be reduced by diminishing any potential health and environmental consequences. The implication is that Basel has the potential to promote environmental justice if these urgent key institutional reforms are made without a total ban on wastes trade in the developing world. Achieving these key reforms further requires unflinching political will from both developed and developing nations to come together and make meaningful changes under the Basel Convention so as to achieve environmental equity and sustainability in global trade relating to hazardous wastes.

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^{136.} See generally N. Grunewald and I. Martinez-Zarzoso, 'Did the Kyoto Protocol Fail? An Evaluation of the Effect of the Kyoto Protocol on CO₂ emissions' (2016) 21(1) *Environment and Development Economics* 1–22; See the 12th Meeting of COP to Basel Convention which adopted 25 decisions, including six identical ones for the three meetings of the conference of the parties. Some of the main outcomes of the Conference included adoption of the e-waste technical guidelines and other road map for action on the implementation of the Cartagena Declaration, national reporting, including a revised national reporting format, the Implementation and Compliance Committee, technical assistance and working Group for 2016–2017 at www.basel.int/theConference/conference/theparties/meeting/CoP12... Default.asp (last accessed 27 June 2016).

^{137.} The 11th Meeting of the Conference of the Parties to the Basel Convention adopted 26 decisions. Some of the main outcomes include the adoption of the framework for the environmentally sound management of hazardous wastes, the adoption of an interim evaluation process for regional centres including other issues relating to wastes as part of a decision on the follow-up to the country-led initiative to improve the effectiveness of the Basel Convention. See the 'Eleventh Meeting of the Conference of the Parties of the Basel Convention' (Geneva, Switzerland, from 28 April to May 2013) at www.basel.int/Default.aspx? tabloid=3256 (last accessed 27 June 2016).