

Transboundary Movement of Hazardous Waste in Africa: Lessons Learnt

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Abstract

There is a long-standing concern that trade flows in hazardous waste could lead to negative impacts on human health and the environment if such wastes end up in countries without capacities for their proper management. On the other hand, trade in waste is sometimes a necessity for countries not having the necessary infrastructure to manage their own wastes in an environmentally sound manner. Waste can also be a resource that can reduce the use of virgin materials and generate energy and a global market for (non-hazardous) waste materials has emerged. This article looks at the latest developments in the international rules managing the transboundary movement of wastes, and highlights some implementation challenges. Some recommendations are suggested to nip the challenge on the bud.

1.0 Introduction

Managing the production, movement and disposal of hazardous waste is one of the most significant sustainability challenges facing humanity globally. Since 1988 when the world witnessed the menacing effects of the large scale dumping of hazardous wastes in a number of African countries, several treaties, protocols and declarations have been released at International and regional levels to combat the effects of chemicals and their disposal across borders. This paper examines international and regional regimes that govern the transboundary movement and management of hazardous wastes. It looks at the meaning, nature and sources of hazardous wastes, its consequences to human health and the environment and the international and regional legal regimes that prevent, remedy hazardous waste incidents and prescribe sanctions for defaulters.

1.1 What are Hazardous Wastes?

Hazardous waste means any waste, which by reason of characteristics, such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger to health, or environment. It comprises the waste generated during the manufacturing processes of the commercial products such as industries involved in petroleum refining, production of pharmaceuticals, petroleum, paint, aluminum, electronic products etc.

The United Nations Environment Programme (UNEP) defines Hazardous waste as any waste or combination of wastes with the potential to damage human health, living organisms or the environment. Hazardous wastes usually require special handling and disposal procedures which are regulated by national and international laws.¹

1.2 Historical Reasons and Need for Regulation

Scientific uncertainty surrounding the full range of effects of hazardous waste on human health and the environment, led to the evolution, and tightening of environmental regulations on hazardous waste disposal. This movement started from industrialized countries in early 1970s. The tightening of regulations on the other hand, led to an increase in the cost of disposal of hazardous wastes, and in turn, resulted in companies and individuals cutting corners to dispose of their wastes. Locating an available and affordable disposal location became intensely difficult, mainly because nobody wants them situated in their backyard. This is an example of the *NIMBY syndrome (not-in-my-backyard) or NIMBYism*, which make the success rate of siting these facilities in developed countries in America and Europe so low. Moreso, studies show that it is very expensive to dispose these chemicals in developed countries.

Lack of waste management laws and regulations or lax enforcement of such laws in Africa in the period before 1980s created a loophole, which made it easy for companies to dump wastes in African countries. It became relatively easy to build toxic waste landfills in Africa, in the most environmentally unsafe manner, due to the absence of sound environmental legislation prescribing this. For example in Dakar, Senegal, the hazardous waste landfill was built very close to the water table thereby posing a threat to the drinking water supply of the estimated 2.5 million residents of Dakar, the capital city.²

The lack of technical expertise necessary for the proper identification of both the imported hazardous waste and its human and environmental impacts, in these sub-Saharan countries made such dumping easier. The exporting companies, which are often aware of this lack of technical expertise on the part of these destination countries, disguise the hazardous wastes as useful commodities that are relatively harmless. Thus wastes are often shipped or labeled as recyclables, liquid fertilizers, road construction or brick-making materials. A good example is the koko dumping incident in Nigeria in which **Mr. Gianfranco Raffaeli** unscrupulously labeled the toxic chemicals as substances “relating to the building trade”. If Nigerian Officials had moderate skills and expertise to identify hazardous chemicals, perhaps they could have easily detected this ruse.

Environmental problems arising from the disposal of hazardous waste in developing countries did not gain international attention until the late 1980s, when the Koko incidents, as well as a number of other dumping cases in some African countries, were internationally reported. These problems and concerns prompted action among nations, and also within their domestic borders, all of which have culminated in both binding and non-binding international agreements that detail rules,

¹ Available @ <https://leap.unep.org/taxonomy/term/5211><accessed 17th September 2021>

² Anyinam, C. ‘Transboundary Movements of Hazardous Wastes: The case of Toxic Waste Dumping in Africa’ (1991) *International Journal of Health Services* 21(4): 759-77.

principles and standards for the management of wastes and the transboundary control of movement of wastes.

2.0 THE INTERNATIONAL LEGAL REGIME ON HAZARDOUS WASTES

Two International Instruments that governs the transboundary control of hazardous wastes are examined hereunder, *The Basel Convention on the control of Transboundary Movements of Hazardous Wastes and their Disposal*, as well as *The Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade*.

2.1 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal 1989

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, which last year celebrated the 30th anniversary of its adoption, is one of the main outcomes of the global efforts taken by governments to control transboundary movements of waste. The Convention provides for a control system with regard to transboundary movements of hazardous and other wastes, thus ensuring transparency for their export, transit and import.

The Convention covers a wide range of wastes defined as “hazardous wastes” based on either, their origin, composition or characteristics, as well as two types of wastes defined as “other wastes” – household waste and incinerator ash. Wastes considered as non-hazardous in the Convention, but which have been contaminated by constituents rendering them hazardous and wastes defined by national legislation as hazardous wastes also fall under the scope of the Convention.

With 187 Parties, it is a Convention with near universal application as transboundary movements with non-Parties are usually prohibited. This means that all exports and imports of wastes covered by the Convention must abide by a common set of rules, making it far easier to control transboundary movements.

Parties to the Convention are required to strictly control international waste trade that does occur, doing this via a notification and consent procedure known as “prior informed consent” (PIC), which is operationalized through government-designated “competent authorities.” The Convention also obliges its Parties to ensure that such wastes are managed and disposed of in an environmentally sound manner, that quantities being transported are minimized, that treatment and disposal of wastes is done as close as possible to their place of generation, and that the generation of wastes is prevented and minimized at source.

Control of this international trade must also be seen as part of efforts to minimize the generation of wastes and to ensure their environmentally sound management. These are noble aims that directly contribute to a healthier planet, both now and in the future.³

Basel Protocol on Liability and Compensation

The Basel Protocol on Liability and Compensation was adopted at the Fifth Conference of Parties (COP-5) on 10 December 1999. The Protocol talks began in 1993 in response to the concerns of developing countries about their lack of funds and technologies for coping with illegal dumping or accidental spills. The objective of the Protocol is to provide for a comprehensive regime for liability as well as adequate and prompt compensation for damage resulting from the transboundary movement of hazardous wastes and other wastes, including incidents occurring because of illegal traffic in those wastes. The Protocol addresses who is financially responsible in the event of an incident, each phase of a transboundary movement, from the point at which the wastes are loaded on the means of transport to their export, international transit, import, and final disposal. The Protocol lacks teeth, however, and has yet to enter into force. The United States remains a non-signatory to both the initial Treaty and the liability Protocol largely because industry and environmental criticism of the Treaty and Protocol and a current lack of political will create disincentives for U.S. ratification. This lack of support from the world's leading generator of hazardous wastes poses a clear threat to the potential success of the Basel Treaty and Protocol.⁴

2.2.1 The latest Addition to the Basel Convention

In May 2019, the Conference of the Parties to the Basel Convention, the Convention's decision-making body, adopted numerous decisions. They include the adoption of the Plastic Wastes Amendments, which aim at placing greater controls on the transboundary movements of plastic wastes by bringing additional types of plastics under the Basel control procedure.

As a result, as of 1 January 2021, the export and import of a broader range of plastic wastes will be subject to the prior informed consent (PIC) procedure. This means that the governments of exporting Parties will have to provide documentation to the governments of transit and destination countries on the intended movement of these wastes, and confirming that the waste in question will be managed in an environmentally sound manner. The movement can take place only upon receipt of consent from concerned countries of import and transit.

³ The *Basel Convention on the Transboundary Movements of Hazardous Wastes and their disposal* 22 March 1989 1673 UNTS 126 art 2(1),(3)

⁴ Choksi S, *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal: 1999 Protocol on Liability and Compensation* Ecology Law Quarterly Vol. 28, No. 2 (2001), pp. 509-539 (31 pages) Published By: University of California, Berkeley <available @ <https://www.jstor.org/stable/24114136>>

At that same meeting, a Plastic Waste Partnership was established under the Basel Convention to mobilize business, government, academic and civil society resources, interests and expertise to improve and promote the environmentally sound management of plastic waste at the global, regional and national levels, and to prevent and minimize its generation. Equally important was the launch of technical work that will provide countries and other stakeholders with the necessary guidance on how to develop an inventory of plastic wastes and on how to manage this waste stream without harming human health and the environment. Once adopted by the Conference of the Parties, this instrument will constitute authoritative guidance at the global level.

Another priority waste stream is waste in electrical and electronic equipment, also known as e-waste. One of the implementation challenges is the difficulty in distinguishing between waste and non-waste. To address this issue in particular, the Conference of the Parties adopted an improved version of the technical guidelines on transboundary movements of electrical and electronic waste, including used electrical and electronic equipment. The document lists criteria for defining waste and non-waste under the Basel Convention, and suggests the type of documentation that should be required by authorities to prevent illegal traffic.

In addition to these important decisions, another significant development is the entry into force of the Ban Amendment on 5 December 2019. This Amendment requires Parties from the Organization for Economic Co-operation and Development (OECD) and the European Union, as well as Liechtenstein, which have ratified the Ban Amendment, to prohibit transboundary movements of hazardous wastes, for final disposal, or for reuse, recycling or recovery operations in other countries.

The Amendment does not affect shipments of “other wastes” under the Convention, which currently includes household wastes and ashes from incineration, but will include a broader range of plastic wastes as of 21 January 2021 pursuant to the Plastic Wastes Amendments.

The entry into force of the Ban Amendment bears significant political weight as a flagship of international efforts to ensure that those countries with the capacity to manage their hazardous wastes in an environmentally sound manner take responsibility for them, while allowing Parties wishing to do so to receive wastes required as raw materials for recycling or recovery industries.

The adoption of the Plastic Wastes Amendments and the entry into force of the Ban Amendment are milestones in the life of the Convention. They illustrate the success of the Basel Convention in bringing the international community together with the aim of tackling some of the most urgent global pollution challenges the world is facing.

2.1.3 Implementation Challenges

As with most of the existing Multilateral Environmental Agreements (MEAs), implementation of the Basel Convention requires, among other things, the establishment of an appropriate legal framework at the national level as well as enforcement of their obligations by Parties to the

Convention. All the actors involved in this global trade, namely the Basel Convention competent authorities and the stakeholders involved in a transboundary movement (e.g., waste generator transporter and disposer), need to be aware of the requirements as set out by this global treaty and reflected in their national legal framework. When it comes to enforcement authorities, they should be trained, establish proper information-sharing and cooperation mechanisms focus not only on import, but also export and transit control, and have access to laboratories as well as to appropriate storage and disposal sites. Corruption is, of course, also a reality that poses a separate challenge.

2.1.4 What Is Illegal Traffic?

Any transboundary movements of wastes:

- i. Without notification to all States concerned;
- ii. without consent of a State concerned;
- iii. with consent obtained from States concerned through falsification, misrepresentation, or fraud;
- iv. that does not conform in a material way with documentation;
- v. that results in deliberate disposal (e.g., dumping) of wastes.

The environmentally sound management of wastes covered under the Convention also has its own specificities and implementation challenges. First of all, the definition and classification of waste, scrap and secondary materials can be different from country to country. The Convention specifies hazardous waste categories, however and as mentioned above, Parties can define additional waste types as hazardous under their national legislation, and introduce requirements concerning transboundary movement procedures applicable to those wastes. The distinction between end-of-life products, non-hazardous waste, and secondary raw materials may not be the same across different jurisdictions and, thus, not subject to further scrutiny. A striking example is the management of end-of-life equipment; it is the fastest growing waste stream, representing a huge problem in many developing countries. And one of the reasons this trade is happening is partly because the export of this waste can be disguised as functional equipment, thus circumventing the application of the Basel Convention procedures.

Moreover, a major hurdle for Customs services is to identify, based on the Harmonized System (HS) code, whether a good destined for export or import, could be a waste. This is further complicated by the fact that the HS focuses on the nature, composition and physical properties of a good in order to classify it, while the Basel Convention focuses on the intention to discard when defining waste, i.e. “substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law.”

The Conference of Parties to the Basel Convention has underscored the importance of establishing, wherever possible, a one-to-one relationship between the Basel waste codes and the Harmonized System (HS) by defining specific codes in the HS for several waste streams covered by the Basel Convention, thus drawing a line between waste and non-waste.

Of particular note, the 2022 edition of the HS includes specific provisions for the classification of e-waste to assist countries in carrying out their work and obligations under the Basel Convention. As for plastic waste, the HS provisions have remained unchanged over time. Two of the most commonly used polymers, PE and PP, do not have harmonized trade codes. However, in 2019 the Conference of Parties requested the Basel Convention Secretariat to submit to the WCO a proposal to specifically identify the several types of wastes, including plastic waste, in the HS nomenclature.

Other challenges include handling and safety procedures when it comes to dealing with hazardous wastes, complexity with implementation of the take back procedure in a case of illegal traffic linked to the initial detection of suspicious shipments, gathering evidence, and in preparing a case for prosecution. The overall implementation challenge is the lack of cooperation among relevant entities in the enforcement chain, as the enforcement of the Basel Convention requires effective cooperation between Basel Convention competent authorities, Customs, and law enforcement authorities.

2.2 The Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade 1998

The Rotterdam Convention was adopted on 10 September 1998 by a Conference of Plenipotentiaries in Rotterdam, the Netherlands. The Convention entered into force on 24 February 2004.

The objectives of the Convention are:

- to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm;
- to contribute to the environmentally sound use of those hazardous chemicals, by facilitating information exchange about their characteristics, by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties.

The Convention creates legally binding obligations for the implementation of the Prior Informed Consent (PIC) procedure. It built on the voluntary PIC procedure, initiated by UNEP and FAO in 1989 and ceased on 24 February 2006.

2.2.1 Major Provisions:

The Convention covers pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons by Parties and which have been notified by Parties for inclusion in the PIC procedure. One notification from each of two specified regions triggers consideration of addition of a chemical to Annex III of the Convention. Severely hazardous pesticide formulations that present a risk under conditions of use in developing countries or countries with economies in transition may also be proposed for inclusion in Annex III.

Once a chemical is included in Annex III, a "decision guidance document" (DGD) containing information concerning the chemical and the regulatory decisions to ban or severely restrict the chemical for health or environmental reasons, is circulated to all Parties.

Parties have nine months to prepare a response concerning the future import of the chemical. The response can consist of either a final decision (to allow import of the chemical, not to allow import, or to allow import subject to specified conditions) or an interim response. Decisions by an importing country must be trade neutral (that is, decisions must apply equally to domestic production for domestic use as well as to imports from any source).

The import decisions are circulated and exporting country Parties are obligated under the Convention to take appropriate measure to ensure that exporters within its jurisdiction comply with the decisions.

The Convention promotes the exchange of information on a very broad range of chemicals. It does so through:

- the requirement for a Party to inform other Parties of each national ban or severe restriction of a chemical;
- the possibility for Party which is a developing country or a country in transition to inform other Parties that it is experiencing problems caused by a severely hazardous pesticide formulation under conditions of use in its territory;
- the requirement for a Party that plans to export a chemical that is banned or severely restricted for use within its territory, to inform the importing Party that such export will take place, before the first shipment and annually thereafter;
- the requirement for an exporting Party, when exporting chemicals that are to be used for occupational purposes, to ensure that an up-to-date safety data sheet is sent to the importer; and
- labeling requirements for exports of chemicals included in the PIC procedure,
- as well as for other chemicals that are banned or severely restricted in the exporting country.

3.0 AFRICA'S REGIONAL INITIATIVES ON TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES

Despite the important provisions of the Basel Convention, Africa witnessed another dumping of toxic wastes in 1992 when 19 million tones of toxic wastes were dumped by Italian and Swiss firms in the borders of the war-torn Somalia, which prompted African leaders under the aegis of the Organization of African Unity (OAU) now African Union (AU) who had had before this incident described Basel Convention as inadequate to forestall the use of African countries as dumping grounds for wastes, felt a more compelling nudging after the Somalia incident to adopt

an African framework on transboundary movement of hazardous wastes. This led to the adoption of the Bamako Convention.⁵

3.1 The Bamako Convention on the ban of the import into Africa and the control of Transboundary Movement and Management of Hazardous Wastes within Africa 1991

The Bamako Convention is a treaty of African nations prohibiting the import into Africa of any hazardous (including radioactive) waste. The convention came into force in 1998. It was negotiated by 12 nations of the African Union (former Organization of African Unity) at Bamako, Mali in January, 1991. it has 29 Signatories and 25 Parties

3.1.1 Origin

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 convention arose also from:

- The failure of the Basel Convention to prohibit trade of hazardous waste to less developed countries (LDCs);
- The realization that many developed nations were exporting toxic wastes to Africa (Koko case in Nigeria, Probo Koala case in Ivory Coast).

3.1.2 Specificity

The Bamako convention uses a format and language similar to that of the Basel convention, except that: (a) it is much stronger in prohibiting all imports of hazardous waste, and (b) it does not make exceptions on certain hazardous wastes (like those for radioactive materials) made by the Basel convention.

3.1.3 Purpose of the Convention

To prohibit the import of all hazardous and radioactive wastes into the African continent for any reason:

- To minimize and control transboundary movements of hazardous wastes within the African continent.
- To prohibit all ocean and inland water dumping or incineration of hazardous wastes.
- To ensure that disposal of wastes is conducted in an “environmentally sound manner”.
- To promote cleaner production over the pursuit of a permissible emissions approach based on assimilative capacity assumptions
- To establish the precautionary principle.

3.1.4 What does the Convention cover?

The Convention covers more wastes than covered by the Basel Convention as it not only includes radioactive wastes but also considers any waste with a listed hazardous characteristic or a listed constituent as a hazardous waste; the Convention also covers national definitions of hazardous

⁵ Koffa M. *Africa Remains a Dumping Site for Hazardous Wastes* <available @ www.liberia-environmentalwatch.org> (accessed 15th September 2021)

waste. Other products also covered under the Convention as waste include that have been severely restricted or have been subject of prohibitions.

3.1.5 General obligations

Countries should ban the import of hazardous and radioactive wastes as well as all forms of ocean disposal. For Intra-African waste trade, parties must minimize the trans-boundary movement of wastes and only conduct it with consent of the importing and transit states among other controls; they should minimize the production of hazardous wastes and cooperate to ensure that wastes are treated and disposed of in an environmentally sound manner.⁶

4.0 Conclusion

The Illegal traffic and dumping of wastes not only pose a serious threat to human health and the natural environment, they also have a potentially adverse impact on the enjoyment of human rights and fundamental freedoms, including the rights to life, health, safe and healthy working conditions, adequate food, safe drinking water, access to information, public participation, and other human rights enshrined in the Universal Declaration of Human Rights and international and regional human rights treaties. There is therefore a compelling need for capacity building activities among others, strengthening legal frameworks, enhancing trade control measures, and preventing and controlling illegal traffic.

5.0 Recommendations

The environmentally sound management of hazardous wastes is becoming a major concern in developing countries due to the diversity of the waste stream and toxic material within it, as well as the negative environmental and public health impacts caused. Hence, several practical recommendations are suggested which include the following:

- i. Creation of public awareness of the potential of recycling hazardous wastes.
- ii. Source reduction.
- iii. Capacity building and human resources development for hazardous wastes recycling.
- iv. Monitoring and evaluation of hazardous wastes management systems as well a reporting programmes.
- v. Development of appropriate infrastructure, technical knowledge, and expertise.
- vi. Strengthening and reforming existing regulatory frameworks.

⁶ Oluwuyi D.S. *The Principles of Nigerian Environmental Law* (2015) Afe Babalola University Press. P165

- vii. Development of decision support for identifying appropriate technologies for treatment of hazardous wastes.
- viii. Provision of funding for identification of emerging best and state-of-the art technologies.
- ix. Development of regional hazardous waste management system.

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