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Transboundary Movement of Hazardous Waste and its Disposal: A Study on Contemporary Environmental Issue and Challanges

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Abstract

Hazardous waste has become a big threat to the environment. It's handling and disposal has presented such challenges which would lead to catastrophic effects. However, one of the major concern relating to hazardous waste relates to its trans-boundary movement which disturbs the scales of environmental justice. There have been various attempts made by the international community to address this issue through the means of conventions and treaties. The Basel Convention has made an attempt to address the problem of trans-boundary movement of hazardous waste. The Convention did achieve some success in dealing with the problem but there are various lacunas and loop holes which need attention for its effective implementation. The Convention fails to impose uniform obligations. It is not uniform and clear in the categorization of hazardous waste. There is no effective monitoring and control mechanism that has been put in place by the Convention. Also, the BAN Amendment does not provide any incentive for the parties for its enforcement. There is a need for predictability, traceability and transparency of trade in recycle in order to accommodate the changing patterns of trade to set measures to protect human health and environment. The Basel Convention needs to overcome the lacunas so that it can achieve the goal of environment justice.

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Introduction

The trade in hazardous waste has increased drastically in the past few years and this has lead to global concern regarding its regulation. Learning from the past the developed nations have made their environmental norms very strict and therefore the disposal of waste there has become a big problem for the industries. Therefore, the industries started to export the waste to less developed countries where the environmental regulations were not developed and disposal was very cheap.

CONTROL SANTIAL STRUCTURE OF CONTROLS BY NC SA *Attribution-NonCommercial-ShareAlike 4.0.* The importing countries without looking into the impact of such disposal on the environment and human health engaged into the trade for economic development.

This racial and economic discrimination became a big threat to the environmental justice and therefore, need was felt to regulate the transboundary movement of hazardous waste and to protect the less developed countries from bearing the burden of waste created by the developed nations. Consequently, Basel convention on trans-boundary movement of hazardous waste

and its disposal was adopted and this marked the development of the legal framework for the regulation of hazardous waste.

With the passage of time various other international instruments came in order to supplement the framework provided by the Basel Convention. The major reason for exporting waste to the developing counties is primarily economic. It has been termed as the impeccable economic logic that the waste are dumped in less developed countries.¹ The rationale being that the pollution which impairs should be done in country with lowest cost which means the country with lowest wages.

Recycling has been promoted by Agenda 21 as one of the activities for achieving sustainable development. The developed countries export large quantities of waste to developing countries in the name of recycling. G8 countries for a sound material cycle society are promoting the concept of ₹3, i.e. reduce, reuse and recycle. The recycling and waste regulation is one of the biggest challenges that all Conventions face.

This project aims to critically analyse the present legal framework for regulation of hazardous waste and suggest the changes that could be made in order to achieve the objectives set forth in the Convention

Basel Convention on Transboundary Movemnt of Hazardous Waste and its Disposal

In 1970s and 1980s the environmental regulations in the industrialized countries tightened and there was public resistance towards the disposal of hazardous waste in line with the NIMBY (Not in my back yard) syndrome. This all led to an escalation in the cost of disposal of waste. The industrialized countries started disposing waste in the less developed countries as it was cheap. It was under this backdrop that need was felt of a Convention to stop the toxic trade. Management of hazardous waste was one of the three priority areas included under the United Nations Environment Programme's (UNEP) first Montevideo Programme on Environmental Law in 1981.

UNEP adopted the Cairo Guidelines, a nonbinding legal document in 1987 which dealt with management of hazardous waste.² On joint proposal of Switzerland and Hungary a working group was convened in order to draft a convention on the same. In October, 1987 a meeting was held in a Budapest, Hungary where it became difficult to bring consensus as one group claimed for absolute ban while other for minimal regulation. The major issues related to what waste should be regulated, the consent requirement, transit state and defining the territorial waters.

The working group began the deliberations at an organizational meeting in October 1987 and between February 1988 and March 1989 five negotiation sessions were held. The Convention was adopted on 22 March 1989 by a Conference of Plenipotentaries in Basel, Switzerland.³ 116 States were represented in the conference. Along with the Convention eight resolutions relating to the implementation of the Convention were also adopted. The convention entered into force in 5 May 1992. There are 186 nations parties to the Convention.

The primary objective of the Convention is to protect human health and environment from the adverse effects of hazardous waste. It covers within its scope wide range of wastes as defined under 'hazardous waste' based on their characteristics and origin. The principal aims of the Convention are as follows:⁴

- Reducing the generation of hazardous waste and promoting environmentally sound ways of its disposal.
- Restricting the transboundary movement of hazardous waste except in accordance with environment friendly ways.
- To develop a regulatory system to oversee transboundary movement of waste wherever it is permissible.

A waste in order to be covered under the Convention must be listed in Annexure I and should also include one of the hazardous characteristics as provided in Annexure III. Also, if any of the exporting, transit or importing nation has listed a waste as hazardous that is also included in the 'hazardous waste'.⁵

Article 4 of the Convention provides for prohibition of disposal of waste to Antarctica which is not a party to the Convention or any party which has banned such disposal. The States are also obliged to follow principles of management which are environmentally sound.⁶ The Convention also facilitates of exchange of information and technical assistance between parties, especially to developing countries.⁷ The Secretariat acts as 'clearing house' facilitating co-operation between the parties.⁸

The regulatory system of the Convention is based upon the concept of prior informed consent. The exporting authorities are required to provide

the transit and importing State with detailed information regarding the movement of waste and the movement is only permissible when all the State parties give a written consent for the same.⁹ In case where there is illegal movement of hazardous waste or the movement is not completed as foreseen, the Convention imposes a duty on the liable State to ensure safe disposal either by way of re-import of the same into the State of generation or otherwise.¹⁰

Article 14 of the Convention provides for creation of centres at regional and sub-regional level to facilitate training and transfer of technology for the management of hazardous waste based on the specific requirements of the region. So far, 14 such centres have been established.

In 1994, the Parties passed an amendment known as the Ban Amendment relating to the complete ban on transfer of waste from OECD to non-OECD countries. The amendment requires ratification from sixty two nations to be binding and so far only thirty-six nations.¹¹

The Parties to the Basel Convention have created two trust funds: a Trust Fund for Basel Convention which is a general fund and is used for financing activities of the Secretariat and a Technical Trust Fund which is a Trust Fund to Assist Developing and other Countries in Need of Technical Assistance in Implementation of the Convention. A Compliance Committee was also set in the Sixth Conference of the Parties (COP-6) by Decision VI/12¹² to further the aims of environmental justice by giving special attention to the particular requirements of the developing countries and countries with economies in transaction. The Basel Protocol on Liability¹³ is one of the first mechanisms in international environmental law which provides for imposing liability and effecting prompt compensation for damages suffered due to the movement and disposal of hazardous waste.14

The Protocol for Liability and Compensation was adopted at the 5th Conference of Parties on December 1, 1999. The Protocol imposes strict liability on the notifier and once the disposing party receives the possession the strict liability is transferred to it.¹⁵ The intermediate parties which are neither the notifier nor the disposer are liable to pay damages only to the extent of their action and its effect. The Protocol has been signed by 13 nations but has not been ratified and hence has not come into force yet.

In 2006 there was a major health crisis in Ivory Coast arising out waste dumped by a ship named Probo Koala, a ship registered in Panama. A Singapore based oil company named Trafigura Beheer BV off loaded the waste to a local handling company which dumped the waste on the Abidjan coast. The grave consequences were reflected by 10 deaths, 69 hospitalisations, need for special health centres, around 1,000 medical consultations and hiring of 30 psychologist.¹⁶ This incident revealed that there are certain loopholes which exist in the implementation of the Basel Convention and that the Convention has not been successful completely.

Need for Harmonisation of Definitions and Standards

For an international accord to be successful it should impose similar standards and obligations on all its signatories. Moreover, the implementation becomes effective with harmonization of requirements and standardisation of terminologies.¹⁷ OECD made such an effort for application of standard guidelines to multinational corporations worldwide.¹⁸ The Basel Convention fails to achieve that uniformity.

The definition of hazardous waste is of paramount importance. Every export program has defined hazardous waste in a different manner. Neither there are guidelines given to interpret the general categories in Annexure I, nor there exists any specific methodology to determine the characteristics such flammability, corrosively and explosiveness.¹⁹ There is confusion as to the treatment of waste where the hazardous waste is mixed with nonhazardous waste. Also, considerations as to what amount of substance renders a waste hazardous or mere presence of the listed substance in however less quantity is sufficient to render the waste hazardous.

A distinction has to be made between waste and product. The intention of export program is not to regulate products.²⁰ The disposal activities are listed but they are not defined. Therefore, the definition should clearly distinguish waste from products. The Convention does not give clarity over the meaning of wastes, hazardous waste and recycled materials and it is left to the subjective determination of the countries.²¹ Therefore, the definition of hazardous waste lacks clarity and in absence of certainty over this fundamental point the Convention may be rendered ineffective.

Disclosure of Information

The exporting nation is required to give a written notification to the importing nation and the latter has to consent to receive the same. In the notification

the nature and quantity of the waste has to be indentified and the most hazardous components should be referred. The information required to be given under this notification is not sufficient for the importing nation to make an informed decision as to the effects of the waste and ways of its disposal. The developing countries lack the expertise, resource and technology to make a proper assessment based on the information provided to them.²²

The notification is provided to the government and not the facility handling the waste. Hence, there is probability that the notice of risks and how to handle them may not reach the facility handling the waste.²³ Article 4 of the Convention provides for the importing nation to provide the information about the facility to the exporting nation. This information is also not sufficient enough in order to make a decision about the capacity of the facility. The flow of information in both the directions is too inadequate to reach an informed decision.²⁴

The prior informed consent procedure is an inadequate protection against the profit seeking government and companies and has created opportunities for improper waste disposal.²⁵ The Parties get ample incentives from waste trade to circumvent their responsibilities and misrepresent before the Secretariat.²⁶ Due to lack of any external mechanism to check the environmentally sound management facilities, the PIC procedure which was introduced with the object of achieving environmental justice and become one of the biggest failure of the Convention.²⁷

Monitoring and Enforcement

The monitoring and enforcement mechanism of the Convention is inadequate. The Secretariat has been entrusted with the duty of monitoring however; the provisions reflect that it is more of an information facilitator rather than a monitor. The Convention provides for arbitration of disputes between the parties. In case of failure to resolve the same, the last resort is to approach the International Court of Justice.²⁸ However, a glance at the past shows the ineffectiveness of both arbitration and International Court of Justice in resolving disputes of such nature.²⁹ The standing requirement of ICJ precludes suits by environmental groups and nations where the disposal is outside their territorial waters but in the sea.

The compensation scheme of the Convention is quite inadequate. The Trust Fund as assessed in 2017 is US \$46,01,990 out of which only US \$10,75,919 is paid and 76.6% of the contribution remains unpaid.³⁰ In the Technical Fund till 2017

the unpaid pledges amount to US \$69,026 and for 2017 the collection amounted to US \$1,13,000.³¹ The Basel Convention Regional Training Centres have not been successful in training and equipping the developing nations with technology to prepare environmentally sound management facilities, respond to environmental crisis and prevent accidents. The primary reason for the failure of the regional centres is the lack of funding.

The Compliance Committee has proved to be ineffective primarily because failure on the part of the parties to submit the reports. The Abidjan crisis involved nations which are party to the Convention and under Article 19 owe a duty to report the incidents of potential non compliance issues in order to enable the Compliance Committee to provide assistance.³² Due to the failure of the Parties to submit the national report to the Secretariat the ability of the Committee to assess the compliance was seriously impaired.³³ The Committee noted that primary reason behind less reporting by countries is lack of funds, inventory and staff to gather the data and prepare reports.³⁴ Another reason for less reporting is that it is more voluntary in nature than obligatory.

Liability

The Convention fails to attribute responsibility for non-compliance on member nation. Although it states that the exporting country must re-admit the waste it is unclear as to who should pay the damages and the cost of cleaning up. International law releases a State from any kind of responsibility if the other State consented to the harm. However, it becomes tricky in applying this consent clause to the developing countries as they can always claim to be inadequately informed. The Convention regulates governmental action but it is argued by many that the actual violators, the multinational corporations are left untouched and hence it is not correct.³⁵ The Convention also leaves it uncertain whether the liability is strict or fault based.

The BAN Amendment

The Basel Ban does not provide much incentive to the industrialised nations who aim for environmental protection but not at the expense of trade and economy. The developing nations oppose the ban as they rely on imported waste material for recovery of metals which form a major source of their income. A complete ban would also lead to reduction in transfer of technology and funds from industrialised nations to the developing nations to build environmentally sound management facilities

as there would not be any incentive for them to do so. The ban would result in loss of income and reduction in the bargaining power which is very critical for achieving environmental justice.

Organisation for Economic Co-operation and Development (OECD) Council Decisions

OECD Council Decision on the Control of Transboundary Movement of Waste establishes control both procedural and substantive over the movement and recovery of hazardous waste among the OECD countries. The objective of the agreement is to assist the trade of waste and minimise illegal handling or abandoning of such waste.

The waste is divided into two categories: green and amber. The wastes that are of least hazard to human health and environment are put under the green list and they are subject to same control as the normal commercial shipment. The definition of hazardous waste under OECD is similar to that of the Basel Convention. It has two parts: one where certain category of waste as provided in Appendix is hazardous and second where the exporting, importing or transit nation defines the waste to be hazardous.³⁶

The exporter has to give a written notice to the concerned authorities of the importing nation.³⁷ The notice contains all the relevant information in respect of the waste. Only after obtaining a written consent there can be movement of waste. In case, due to any reason the waste is not transported in accordance with the Convention there is a duty on the exporting nation to return the waste.³⁸

OECD does not specifically incorporate the concept of prior informed consent. In other respect the requirements are much similar to the Basel Convention and so are the defects. The definition of hazardous waste is too general and the implementation mechanisms are not in proper place. Therefore, a stringent control over the illegal movement of waste still seems lacking.

BAMAKO Convention

In 1998, 800 drums containing untreated industrial and nuclear wastes were discovered in Nigeria at a farmer's backyard which he rented to an Italian company. This waste contaminated the adjacent river and affected the health of local population adversely.³⁹ In 1992, Somalian government entered into a contract with Italian-Swiss Company to accept the dumping of waste for 20 years for a consideration of 80 million dollars.⁴⁰ In 2000, South Africa entered into agreement with Australia to import 60 million tonnes of waste.⁴¹

It is in this backdrop that a need for a Convention for Africa was felt. The Bamako Convention was drafted by Organisation for African Unity in 1991 and it came into force on April 22 1998. 29 States are signatories to the Convention out of which 25 are Parties.⁴² The compelling reason for the existence on this Convention was failure of Basel Convention to restrict the trade of waste to least developed countries.

Article 2 of the Convention defines hazardous waste as waste belonging to Annexure 1 or possessing characteristics specified in Annexure 2, waste defined as hazardous by the exporting, importing or transit nation, radioactive waste and hazardous substance banned by government regulatory action in the manufacturing nation.

The Convention bans import of hazardous waste into Africa from any non-Contracting parties and makes such import a criminal offence.⁴³ The Convention imposes strict and unlimited liability which is joint and several on the hazardous generators.⁴⁴ It also requires that the Contracting nations ensure management of hazardous waste in an environmentally sound manner. The nations are also required to submit report on hazardous generators to the Secretariat to facilitate annual audit.

By imposing a complete ban the Convention ensures that no country is lured into risking the human health and environment for the sake of money but at the same time it ignores the importance of recycling and reclamation.⁴⁵ The total ban also deprives the African economies from deriving benefits in terms of money as well as technology through the hazardous waste trade.

The Convention does not contain a liability regime within itself and the enforcement is more in form of unilateral state action.⁴⁶ The rule of re-importation as provided in Article 9 is very strict and there is no room left to explore other environmentally sound and economic options for the disposal of waste.

The double-hurdle test for defining hazardous waste provided under the Basel Convention has been transformed into either/or test and thereby expanding the scope of the Convention. Bamako Convention adopts a precautionary principle approach which is a shift from the cost-benefit approach of the Basel Convention.⁴⁷

The Bamako Convention represents the unity and strength of African nations. It protects the nations

from exploitation by foreign industrialist. The cooperation and solidarity on the part of African nations is essential to end the trade in trash.⁴⁸ As rightly viewed by the OAU the trade in hazardous waste is a crime against Africa and the African people.⁴⁹ Therefore, despite certain shortcomings the Convention serves and protects the interest of all African nations.

WAIGAINI Convention

The Waigaini Convention is a Convention to ban import of hazardous and radioactive wastes into forum island countries and to control the transboundary movement of such waste in South-Pacific region. It entered into force on 21 October 2001. The implementation on the Convention is entrusted upon Secretariat for the Pacific Regional Environment Programme (SPREP).⁵⁰ The responsibilities of SPREP include co-ordination with Secretariat of the Basel Convention, arranging the meetings of the Parties, assisting in identifying cases of illegal traffic and supplying the Parties with necessary scientific and technical support.⁵¹

The Parties are required to designate or establish a competent authority or focal point, entrusted with the duty of transmitting and receiving information in relation to the waste.⁵² The parties have to submit a report to the Secretariat detailing about the amount of waste generated in its jurisdiction. The exporting nation has to apply in writing to the importing nation and within sixty days the importing nation should convey its decision in writing. The movement of waste is not permitted without a prior written consent.

Stockholm Convention

The Stockholm Convention on Persistent Organic Pollutants was adopted at a Conference of Plenipotentiaries on 22 May 2001 in Stockholm, Sweden and entered into force on 17 May 2004.⁵³ It is a global treaty to protect the environment and human health from chemicals which remain intact in the environment for a long time. The Convention deals with waste management of Persistent Organic Pollutants (POPs) and imposes an obligation on the members to ensure that the stockpiles and wastes containing POPs should be managed in an environmentally sound manner and should be properly identified.⁵⁴ The Convention also provides for the nations to take into consideration all relevant international rules, guidelines and standards while facilitating the transboundary movement of such waste.

United States Regulation of the Export of Hazardous Waste

The export of hazardous waste in US is regulated by the United States Environmental Protection Agency. The export of hazardous waste without prior written consent of receiving state is prohibited.⁵⁵ The Resource Recovery and Conservation Act, 1976 (RCRA) provides for 'cradle to grave' regulations to deal with hazardous waste. The framework provides for tracking of the waste throughout its life through the uniform filing of the documents.⁵⁶ There is a Uniform Hazardous Waste Manifest is a document which describes the waste and always should accompany it.

RCRA⁵⁷ and the Comprehensive Environmental Response, Compensation and Liability Act⁵⁸ the major legal instruments which control the trade in hazardous waste offer incentives to the domestic generators to export hazardous waste.59 The US courts have described the RCRA as 'mind numbing' has its provisions are very time consuming and lengthy.⁶⁰ It includes quite a number of enforcement mechanisms applicable to domestic disposals increasing the cost and difficulty of disposal within United States.⁶¹ CERCLA's joint and several liability regime is fearsome and so severe that generator tends to export the waste in order to avoid any litigation. CERCLA does not apply to release of hazardous waste in foreign even if it is result of export made by United States.62

World Bank Requirements

The World Bank provides loans to countries for economic development projects and as part of the terms of the loan it provides for certain environmental compliances. The World Bank regulations prohibit the export of hazardous wastes from any project which is funded by it.⁶³ It does not pay for any kind of shipment of hazardous waste to developing countries. It also mandates that a prior informed consent should be obtained from the receiving nation before disposing the waste in an environmentally sound manner.⁶⁴

The Road Ahead: what more needs to be done

Environmental Justice in the words of Clinton is basically premised on the disproportionate adverse and huge impact on the health and environment of the low-income group and the minority population.⁶⁵ The environment justice movement traces its roots to United States in response to the recognition of the fact that the minority and the low income population have to bear the heat of the environment degradation and bear its unnecessary burden.⁶⁶

The two central methods to achieve environment justice that have been adopted are the polluter pays principle and the precautionary principle.⁶⁷ The Rio Declaration on Environment and Development is credited with introducing environmental justice in global arena by recognising the economic vulnerability of the least developed countries.⁶⁸ In Principle 14 it discourages the NIMBY syndrome to be followed by the nations.⁶⁹

The Basel Convention promotes the goals of environmental justice in much more direct way than the US law where the concept originated.⁷⁰ The Basel Convention gives priority to human health and environment and emphasises on taking all possible steps which are environmentally sound for the same.⁷¹ It tries to achieve both procedural and distributive justice by giving a say to the developing nations to control the international movement of hazardous waste.

In order to ensure that PIC process is followed properly a reviewing committee can be created. This reviewing committee could perform the function of granting license to the facilities which comply with environmentally sound management standards and hence prevent any non-compliance of the Convention. This would boost the growth of technology in developing countries as on one hand they would make efforts to obtain the license to benefit their economy from waste trade, while on the other hand industries and developed nations would give them all kinds of assistance so that they could engage in trade with them. The International Atomic Energy Agency's inspection system could serve as a model for the same. This pre-trade requirement although cumbersome would serve better purposes than a complete ban.

In order to implement the Basel Convention in full spirit a reliable monetary fund is necessary. The fund must be capable of meeting any crisis situation involving mishandling of waste. The good funding would also facilitate creation of new regional training centres and supporting the existing ones. Technological advancement is of paramount importance in order to balance environment and development.

There is a need for predictability, traceability and transparency of trade in recycle in order to accommodate the changing patterns of trade to set measures to protect human health and environment.⁷² The framework should govern all kinds of wastes as there are instances where the hazardous waste is mixed with house-hold wastes and it escapes the regulations. A global playing field must be created to set standards for recycling activities.

Conclusion

It is now a well-accepted fact that waste generation cannot be completely stopped. Therefore, the only option available is to ensure safe and environment friendly disposal of hazardous waste. The loop holes in the legal framework need to be closed in order to avoid any environmental crisis and adverse impact on human health. The nations need to understand that unregulated waste trade may be economically beneficial but its benefits are only short term.

The Basel Convention needs to be amended and the definition of hazardous waste should be made more specific. The definition of hazardous activities, transit nation needs to be clear. A uniform standard should be set to decide the category of waste and it should not be left to the subjective standards of the parties. The Convention should create an independent Committee and should not rely on the good faith of the parties to ensure the compliance with the Convention.

A reliable monetary fund with regular and adequate funding mechanism should be put in place so as to meet any situation of environmental crisis arising out of waste disposal. The Basel Protocol on liability needs to be ratified and brought into force so as to ensure that those who contravene the provisions of the Convention should be made to pay for the damage and clean-up activities.

The framework regulating the movement of hazardous waste should incorporate environmental justice. To achieve this, the developing countries should be mobilised and trained so as to assess the cost and impact of the transaction and to build environment friendly management facilities. A total ban would not serve the purpose of achieving economic justice rather it would be detrimental for the growth of the less developed nations. Therefore, the Basel Convention needs to be amended to meet the present day requirements and also the regional agreements and national legislations should also incorporate the changes with the changing trade patterns.

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- 61. Id.
- 62. Id, §9601(8) and §9601(22)
- 63. World Bank News Release 89/51.
- 64. Hackett, supra note 23 at 310.
- 65. Exec. Order No. 12898, 59 Fed. Reg. 7629, § 1-102(b) (1) (Feb. 11, 1994)."
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