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# Hazardous Waste Management: A Need to Curb Ground Pollution

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## ABSTRACT

*India is the second most populous country, which has about 16% of the world population and 2.5% of the land area. Rapid industrialization in last few decades has led to the depletion of precious natural resources in India. Further, the industrial developments have also led to the generation of huge quantities of hazardous wastes, which have aggravated the environmental problems in the country by polluting natural resources. Therefore, rational and sustainable utilization of natural resources and its protection from toxic releases is vital for sustainable socio-economic development. Hazardous waste management is a new concept for most of the Asian countries including India. The lack of technical and financial resources and the regulatory control for management of hazardous wastes in past had led to the unscientific disposal of hazardous wastes in India, which have posed serious risks to human, animal and plant life. India is the first country that has made constitutional provisions for protection and improvement of the environment. Article 48-A of Indian Constitution empowers the State to take steps for protection and improvement of the environment and safeguarding the forest and wild life of the Country. Under Article 51 A (g) of the Constitution, one of the fundamental duties of every citizen of India is to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures. The research methodology adopted will be doctrinal in nature including the principles of applied and fundamental research. The literature review shall include a study of various books and articles of eminent authors and jurists expert in the field of environment law. A perusal of the fact that how the correct utilization of natural resources today can help the upcoming generation will be done in light of decided case laws and legal provisions.*

**Keywords:** *Industrialization, Sustainable, Constitution, Environment, Compassion*

## I. INTRODUCTION

Environment, rather the protection and preservation of environment are the hot topics in today's world. There are Conventions and Conferences being organized to discuss every

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aspect of environment and how to protect it from pollution and other extraneous factors. Countries are enacting legislations on environmental protection due to the pressure from international community and thus the entire picture appears rosy. But a few decades back, not much attention was given to environment, probably because most of the world was trying to recover from the destruction of the Second World War and thus intense industrialization was need of the hour. But this resulted in increase in pollution and therefore the countries realized that something has to be done in order to preserve the natural environment of earth. Some of the major issues facing the world were: global warming, ozone hole in Antarctica, air pollution, acid rain, and now recently, management of hazardous wastes. The problem of hazardous wastes and their disposal is of particular importance because these wastes are the product of industries and as such cannot be stopped all together. These wastes are very toxic in nature and can cause great damage to environment and public health.

Wastes, as by-products of industrial or household activity exist in solid, liquid and gaseous forms. Industry and mining are the main sources of hazardous wastes in industrialized countries, though small-scale industry, hospitals, military establishments, transport services, and small workshops all contribute to the generation of large and diverse quantities of hazardous waste in both the industrialized and developing worlds<sup>2</sup>. It is also important to understand the definition of hazardous wastes as accepted worldwide. The *Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal, 1989* defined “hazardous wastes” as Wastes that exhibit one or more hazardous characteristics, such as being flammable, oxidizing, poisonous, infectious, corrosive, or exotoxin. Improper handling and disposal of hazardous wastes can affect human health and the environment through leakage of toxins into groundwater, soil, waterways, and the atmosphere. Environmental and health effects can be immediate such as on site human exposure to toxic chemicals in the waste or long-term contaminated waste can leach into groundwater or soil and then into the food chain. In the absence of adequate safeguards, recycling and recovery operations can result in greater dangers on account of the higher level of worker exposure and handling.<sup>3</sup> The United Nations Environment Programme (UNEP) estimates total annual international generation of hazardous wastes to be between 300 and 500 million tonnes, with OECD countries accounting for 80 to 90 per cent of this quantity. With this rapid increase in generation of waste a very serious problem stood in front of

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<sup>2</sup> JONATHAN KRUEGER (2001), ‘THE BASEL CONVENTION AND THE INTERNATIONAL TRADE IN HAZARDOUS WASTES’, IN OLAV SCHRAM STOKKE AND ØYSTEIN B. THOMMESSEN (eds.), YEARBOOK OF INTERNATIONAL LAW - OPERATION ON ENVIRONMENT AND DEVELOPMENT 2001/2002 (London: Earth scan Publications), 43–51.

<sup>3</sup>Id.

western nations – ‘How to dispose it all’? The cost of disposing all the waste was very high in their countries so they sent off the waste to third world countries for its disposal. This was a harmful practice and the international community took action on it and this came in the form of Basel Convention on the Trans boundary movement of hazardous waste in 1989.

Another element in the management of these hazardous wastes is the implementation of the international agreements within the member countries. If there is no effective implementation then the problem of waste management will remain unresolved. The researcher will look into India’s case as an example and will examine how much India has implemented the agreements of Basel convention and the subsequent developments.

## **II. WHAT ARE HAZARDOUS WASTES?**

There are many definitions of this term but the internationally accepted definition can be found in the declaration of the **Basel Convention, 1989** as being those solid, liquid or gaseous substances that exhibit one or more hazardous characteristics, such as being flammable, oxidizing, poisonous, infectious, corrosive, or exotoxin. The convention defines wastes as substances which are subject to disposal<sup>4</sup>. Wastes are produced in the normal course of operation of any industrial, commercial or institutional operation. Because of their chemical, physical or biological properties, some wastes are more dangerous than others. These are known as a hazardous waste and require special handling and disposal to prevent impact on human health and the environment. Thus all the industrial, medical and household wastes will come in the category of ‘wastes’. Some of these wastes contain harmful chemicals and heavy metals like lead, mercury, cadmium and their compounds which pollute the soil and water of the nearby areas.<sup>5</sup> Some of these and certain other industrial and institutional wastes are categorized as ‘hazardous’ or toxic because of the special care needed while handling, storing, transporting and disposing of them, to ensure that they are isolated from contact with humans and natural environment. Polythene, for e.g. is the biggest source of air pollution as it has got the after effects of dumping, mixing, burning etc. The governments have from time to time, declared ban on the use of polythene as this has the capacity to ruin the ecological balance.

## **III. DANGERS AND PROBLEMS RELATED WITH HAZARDOUS WASTES?**

Industry and mining are the main sources of hazardous wastes in industrialized countries,

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<sup>4</sup> Article 2(i) of the Convention.

<sup>5</sup> JORGE.E.HARDAY, ENVIRONMENT PROBLEMS IN THIRD WORLD CITIES , pg. 65, (Earth scan publication), London, 1992

though small-scale industry, hospitals, military establishments, transport services, and small workshops all contribute to the generation of large and diverse quantities of hazardous waste in both the industrialized and developing worlds. Improper handling and disposal of hazardous wastes can affect human health and the environment through leakage of toxins into groundwater, soil, waterways, and the atmosphere. Environmental and health effects can be immediate such as on-site human exposure to toxic chemicals in the waste or long-term contaminated waste can reach into groundwater or soil and then into the food chain. Damage caused by hazardous wastes also takes an economic toll, and cleaning up contaminated sites can be costly for local authorities, particularly if they are located in poor communities. In the absence of adequate safeguards, recycling and recovery operations can result in greater dangers on account of the higher level of worker exposure and handling.<sup>6</sup>

While exact figures regarding the amounts of hazardous waste generated internationally are quite difficult to specify, some information does exist. But till now for the purposes of discussion there has been no internationally accepted definition of “hazardous wastes” been formed yet. This is perhaps because of a difference in opinions of developed and developing countries, because transporting certain kinds of wastes to developing countries might be economically beneficial for these developed States but the developing countries put up strong opposition to this practice and thus want all kinds of wastes to be categorized as ‘hazardous’.

#### **IV. SOLUTION OF THIS PROBLEM**

The solutions to this problem are either to dispose off the wastes or recycle and use them again in different forms. Now bio - degradable wastes like vegetables, fruits, paper, plants, wood, human body etc. can be easily disposed off as they decompose naturally due to bacterial and other reasons. Thus the end product after their disposal is manure and other natural products which are not harmful to anyone. But then there are non-bio - degradable wastes like metals, glass and plastics which do not decompose naturally and thus artificial methods have to be used for their decomposition. Even then the end products sometimes are harmful and thus the problem remains. Now to dispose off wastes two options are mostly used – either to bury them under land and wait for it to decompose itself naturally, or secondly to incinerate them at very high temperature in the presence of oxygen so that the harmful substances present in the wastes may react with oxygen and thus get oxidized into non-harmful substances like hydrogen, carbon dioxide etc. also another convenient way is to dump the waste at some waste dumping site. But this option, though extensively employed, is

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<sup>6</sup>Supra Note 1

a short term measure and with the volume of waste rising every year there is going to be a shortage of these dumping sites and existing ones will be already overflowing. Netherlands has already sort of run out of land filling sites.<sup>7</sup> Thus they are much more emphasizing on land reclamation from sea and permanently disposing of the wastes. The cost of disposing wastes by various means is much and it puts additional financial burden on a country's economy. Also, the taxpayers refuse to pay up more a waste disposal site any more. Thus to avoid spending large amount of money on waste disposal the countries are now exporting these hazardous wastes to those countries which have better waste disposal facilities and can accommodate the additional waste. This practice has given rise to Trans - boundary trading of hazardous wastes. Disposal of wastes, prima facie is the duty of the country that is actually created this waste and not that country which has better and suitable means of disposing waste or else it will create an imbalance in the nature where on the one hand one country will create wastes and the other will keep on removing it.

### **Legislation in India**

Article 21 of the Indian Constitution<sup>8</sup> is a fundamental right which has very well defined the meaning of 'Right to Life' by leaving the scope to include 'Right to Environment' as well. It can be said that judicial decisions have always taken the help of this article while deciding rights and liabilities of people. Article 48-A of the constitution comes under Directive principles of State policy<sup>9</sup> which has given the duty of protecting natural resources including flora and fauna to **State**<sup>10</sup> and Article 51 A (g) of the constitution comes under fundamental duties<sup>11</sup> which has given the duty to take care of natural resources and use them wisely to the citizens of India. The state's responsibility with regard to raising the level of nutrition and the standard of living and to improve public health has been laid down under Article 47 of the Constitution<sup>12</sup>. The directive principles of state policy and the fundamental duties explicitly enunciate the national commitment to protect and improve the environment. Judicial interpretation has strengthened this constitutional mandate<sup>13</sup>. The 'polluter pays' principle which is a part of the basic environmental law of the land requires that a polluter bear the

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<sup>7</sup> Frances Cairneross, *Costing the Earth*, pg. 217 Harvard business school press, Boston, 1993

<sup>8</sup>No person shall be deprived of his life or personal liberty except according to procedure established by law.

<sup>9</sup>Part IV of Indian Constitution

<sup>10</sup>**The term has been defined in Article 12 of the Indian Constitution which includes governments, Parliament, Local bodies, Other Authorities etc.**

<sup>11</sup>Part IV A of the Indian Constitution

<sup>12</sup>The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavor to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health

<sup>13</sup> SHYAM DIVAN and ARMIN ROSENCRANZ, *ENVIRONMENTAL LAW AND POLICY IN INDIA* 41 - 43 (2d ed. 2001)

remedial or cleanup costs as well as the amounts payable to compensate the victims of pollution<sup>14</sup>. The ‘precautionary principle’ requires that the government authorities should anticipate prevent and attack the causes of environmental pollution<sup>15</sup>.

Section 3 of the **Environment (Protection) Act, 1986** gives the power of protecting and improving environment to the Central Government which includes coordination with State Governments as well. Apart from this, Section 6 of the Act empowers the Central Government to make rules for regulating Environmental Pollution in which the government has got the right to decide the standards of quality of air, water or soil for various areas and purpose etc. Failing to comply with the standards, provisions have been included for imposing penalty upon the defaulters<sup>16</sup>. The Basel Convention on the control of Trans boundary Movement of Hazardous Wastes and Disposal was signed by India on 15th March 1990, ratified and acceded to in 1992. A ratification of this convention obliges India to address the problem of Trans boundary movement and disposal of dangerous hazardous wastes through international cooperation. However, as per the Basel Convention, India cannot export hazardous waste listed in Annex VIII of the Basel Convention from the countries that have ratified the ban agreement. But, the convention agreement does not restrict the import of such wastes from countries that have not ratified the Basel Convention. It is through the orders of the Hon. Supreme Court that the import of such wastes is now banned in the country.<sup>17</sup>

## V. JUDICIARY’S CONTRIBUTION

The concept of ‘Right to Life’ has been broadened through judicial pronouncements. Needless to say, the Judiciary has played a vital role in interpreting Article 21 of the Indian Constitution. Judges have already declared that Right to Life means and includes Right to live in a clean environment. In **M.C. Mehta vs. Union of India**<sup>18</sup> (Vehicular Pollution Case), the Supreme Court tried to interpret the term ‘Right to Life’ and said that Right to breath clean air is also an integral part of Right to Life. Another case in which the Judiciary tried to show mirror to the Government was **T.N. Godvarman vs. Union of India**<sup>19</sup> in which it ordered the Central Government to take appropriate steps for the protection and preservation

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<sup>14</sup>Indian Council for Enviro- Legal Action vs. U.O.I. AIR 1996 SC 1446

<sup>15</sup>Vellore Citizens’ Welfare Forum vs. U.O.I. AIR 1996 SC 2715

<sup>16</sup> See Section 15 of the Environment (Protection) Act, 1986

<sup>17</sup> “The Political Framework in India - Impacts on the E-waste Recycling System”, [http://ewasteguide.info/the\\_political\\_framework\\_in\\_india\\_impacts\\_on\\_the\\_e\\_waste\\_recycling\\_system](http://ewasteguide.info/the_political_framework_in_india_impacts_on_the_e_waste_recycling_system)

<sup>18</sup>WP 13029/1985

<sup>19</sup>AIR 2000 SC 1636

of the environment. In **Murli S. Deora vs. Union of India**<sup>20</sup>, the apex Court pointed out that smoking is injurious to health and therefore prohibited smoking in public places, thus ensuring the right to life of non – smokers. Also in the case of **Subhash Kumar vs. State of Bihar**<sup>21</sup>, the Supreme Court declared that ‘Right to Life under article 21 includes the right to enjoy pollution free water and air’. Actually, this was the case which gave a lesson to municipalities and other agencies of the government that they cannot escape their liabilities of making and ensuring a ‘pollution free’ environment. In **Rural Litigation and Environment Kendra, Dehradun vs. State of Uttar Pradesh**<sup>22</sup>, a letter was treated as P.I.L. by the Supreme Court of India and it ordered the closure of illegal lime stone mining which was a danger for environment and thus was playing an important role in violating the provisions of Article 21 of the Constitution of India.

Thus, considering vigilance and check of judiciary upon the functioning of legislature as far as the issues of environment are concerned, it can be said that the former has tried its level best to be a ‘guide’ for others. The extent of the judgments was such that some of the judges have been called as ‘**Green Judges**<sup>23</sup>’. It has gone up to the extent of conflict with other organs of our democracy in order to save the environment. Needless to mention the fact that judges of this nation have tried their level best to ensure that the Fundamental right of environment is not disturbed or hampered in any way.

Considering the magnitude of the problem and the extent of hazardous waste generated and thus environmental pollution in the case of *Research foundation for Science vs. U.O.I*<sup>24</sup>, the apex Court had issued notices to all the State Governments, Central Pollution Control Board and State Pollution Control Boards, Pollution Control Committees in the Union Territory, so as to identify the problem, and the extent of such waste, availability of the disposal sites and various other aspects relevant to minimizing the generation, its proper handling and disposal with a view to safeguard the environment. The Court constituted a High Power Committee with Prof. MGK Menon as its Chairman to examine all matters in depth relating to hazardous waste and to give a report and recommendations at an early date. The High Power Committee submitted its report on 20<sup>th</sup> April 1998 and on the basis of which the Court gave its order on 14<sup>th</sup> October 2003. The main points of the judgment were:

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<sup>20</sup>AIR 2002 SC 40

<sup>21</sup>AIR 1991 SC 420

<sup>22</sup>AIR 1988 SC 2187

<sup>23</sup>Hon’ble Mr. Justice Kuldeep Singh (Retd.) was one of the Green judges, a term used for judges who have been inclined towards the protection of environment and have reflected their wisdom in the judgments pronounced.

<sup>24</sup>(2005) 13SCC 661

1. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

2. Environmental concerns have been placed at same pedestal as human rights concerns, both being traced to Article 21 of the Constitution of India. The rights to information and community participation for protection of environment and human health are also rights which flow from Article 21. The Government and authorities have thus to motivate the public participation

3. Applicability of the precautionary principle and polluter pays principle, which are part of the concept of sustainable development, is to be ensured in all decision making processes.

At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided. The compliance to this order is still being undertaken and the effectiveness of the implementation is still to be analyzed.

## **VI. ENVIRONMENT AND DEVELOPMENT: IS THERE ANY CONFLICT?**

It won't be wrong to say that the Indian judiciary has always been in tussle with legislature while deciding the issue of Environment vs. Development. Of course, in a developing country like India, need for a balance between the two has always been felt. Rapid industrialization including demands of the society has actually posed a problem for the environment. India, we all know is the second most populous country of the world comprising of nearly 130 crore people. To *adjust* this population, there arises a need for the construction of houses, schools, hospitals, toilets etc. This has been done for a long time at the cost of natural resources. Forests and trees have been cut off regularly to meet the needs of the society. Rapid population growth has resulted in the construction of apartments, universities, schools etc. as everyone wants a habitat for his or her survival. It won't be wrong to say that environment has actually sacrificed itself for the sake of human beings. But as every coin has two sides, this sacrifice has also resulted in natural disasters like earthquakes, floods, drought, tsunami etc. Citizens as well as governments (especially Asian) have not taken any lesson from these natural calamities which ultimately have put a question mark on their own survival.

However, development, if done in a '*judicious*' manner, will definitely yield good results. There are countries in the world (especially European) which have taken adequate steps for

protecting the environment and establishing basic infrastructures for their citizens at the same time, by following International Conventions and Treaties related to environment protection. 'Development' should not include overutilization and mismanagement rather it should simply be confined to '**Sustainable Development**<sup>25</sup>'. In any country including India, 'Birth Right' and 'Utilization of natural resources' cannot be taken away, but using natural resources in a manner suitable for survival can definitely be done. Article 21 of the Indian Constitution talks of 'Right to Life' which includes 'Right to live in a clean environment' as well as 'Right to Development'. Both these rights have to be interlinked and balanced in order to meet the needs of our society as well as environment. For e.g. if there arises need to cut a tree for making highways, laying down railway tracks or any other development related work, it should be ensured that two trees are planted at the same time for maintaining the ecological balance. Our Constitution framers were very well aware of the importance of environment and that's why never hesitated to include the provisions related to the same. They never gave importance to development at the cost of environment but left the scope open for citizens to use natural resources for their convenience. So, in my opinion if natural resources are used in a prolific, sustainable and sensible manner, there won't be any conflict between Right to Development and Environment and human beings can very well ensure their survival and upliftment in the present as well as future time.

## VII. EPILOGUE

So far we have seen the problem of hazardous wastes and also the international reaction to it. There have been some landmark agreements like Basel Conventions but these are also not immune to criticism. Like most other global environmental treaties that pose unequal risks and benefits to developed and developing nations, the implementation of the Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal is fraught with uncertainties. The destination countries may not be fully informed about the risks, and the parties (the exporting and the importing countries) are not required by the treaty to monitor the disposal procedures to ensure minimal adverse human health and environmental effects<sup>26</sup>. Thus we have to accept that if there are good effects of an agreement then the adverse effects will also come out. The Basel and other conventions try to address the problem but it is yet to be seen how much they are successful in tackling it effectively.

As far as the Indian scenario is concerned, it can be understood that a country which is still

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<sup>25</sup>The concept was originated in Stockholm declaration, 1972 which means using natural resources in a judicious manner presently in order to meet the needs of future generation as well.

<sup>26</sup>Olurominiyi Ibitayo, "Trans boundary dumping of hazardous waste", [http://www.eoearth.org/article/Transboundary\\_dumping\\_of\\_hazardous\\_waste](http://www.eoearth.org/article/Transboundary_dumping_of_hazardous_waste)

struggling to maintain a proper balance between ‘Development’ and ‘Environment’, has to go a long way ahead. Provisions, whether statutory or judicial will have no importance until and unless people themselves carve a way that leads to environmental protection. Their own survival is dependent upon the health of Mother Nature so in personal as well as national interest they have to be eco-friendly. Notwithstanding the fact that development is also required for a country to move ahead, it must not be done at the cost of nature. It is need of the hour that Indian judiciary, legislature as well as executive along with municipal bodies should come forward and find a definite solution, which can include following Conventions and Treaties related to Environment Pollution in a proper manner, recycling, limited deforestation, making environment friendly laws etc. to overcome this problem or else the day is not far away when human beings will be on the verge of ‘extinction’ because of their own misdeeds.

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