



## Management of Hazardous Waste: Policies and Legal Framework - A Critical Analysis

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### **Abstract**

*Growth and Development has brought in several challenges before the country and one of the challenges is management and handling of waste. Rapidly growing industries have contributed to the depletion of natural resources and the production of hazardous waste material, which is harmful to its fragile ecosystem and human beings that thrive on it. Worldwide generation of hazardous waste has crossed 400 million metric tons which makes it about 80 fold since 1945. Though India is at bit better footing in this regard than some other countries, but this fact cannot be denied that existing Laws and Policies related to Hazardous Waste management in India are not proving to be adequate and the implementing authorities, especially the State Pollution Control Boards (SPCB) is facing difficulties in identifying hazardous waste generating units on other hand state government are unable to identify hazardous waste landfill sites. Situation is even worse in ship breaking industry. Though judiciary had come forward and took cognizance of the alarming situation created by dumping of hazardous waste, but now the time had come to declare that such dumping violates fundamental rights guaranteed by the Constitution. Present paper examines giving and misgiving of the international, comparative and finally Indian hazardous substance and waste laws. Also an attempt is made in this paper to provide critical appraisal of present policies with respect to management of hazardous waste.*

**Key words:** Hazardous, environment, pollution, insurance, human health



## Introduction

Today environment has come a long way of time when it was the hostage of terms like trees, tigers, and conservation. Now almost everybody understands the importance of wildlife conservation, but negative effect of toxic chemicals upon animals and environment is difficult for them to grasp. Long back in 1962 study done by Rachel Carson, titled summer springs<sup>1</sup> was an effort to draw the attention of international community towards the adverse use of Hazardous substances. Later with the advancement in medical technology scientist came up with scientific findings that some of the hazardous waste are so dangerous that they can even cause Cancer, Birth defect, nerve damage, genetic mutation, and in some cases instant death too.<sup>2</sup> Massive destruction in Bhopal and Chernobyl are testimony to this finding.

Increasing population and never ending desires of human being has given birth to industrialization which now has become a symbol of growth and development. The

modern lifestyle and its benefits exist because of industry. Health-giving pharmaceuticals, labor-saving household appliances, automobiles and ships, paints and detergents, synthetic fibers and polythene packaging, personal computers and TVs – the list of useful manufactured goods is almost endless. But with the goods come the “Bad`s”.<sup>3</sup> Growth and development has brought in several new challenges before the country and such challenges are of management and handling of waste. Rapid growth of industries in India has resulted in the generation of an increasing volume of hazardous wastes (herein after HW). HW both indigenously generated and imported from other countries for recycling or reprocessing, need scientific treatment and disposal. However, only a few secured landfill sites are available in the country for disposal of hazardous wastes in an environmentally sound manner. Illegal dumping of hazardous wastes by industries may cause severe environmental pollution and cause damage to health of locals. It



is un-denying fact that as 20<sup>th</sup> century was an era of modernization and 21<sup>st</sup> century is an era of Consequences of modernization, thus we have to be prepared to face them. In this regard judicial activism has today widened the scope of Article 21 and thereby brought Right to health<sup>4</sup> and Right to live in pollution free environment within the scope of fundamental rights. Further various legislations are drafted, treaty and conventions are signed and agreements are made to mitigate the effects of consequences of modernization. How far these efforts are successful in achieving its objective and what more can be done to achieve them is a matter of discussion.

### **International law related to management of Hazardous waste**

Stockholm conference in 1972 brought a significant change in field of environmental law around the world by making parties cautious about their responsibility towards degrading environment, which was neglected by them in the

light of development. Though not specific, but Stockholm conference did took note of the problems with regard to Hazardous waste by prohibiting the discharge of toxic substances and all other substances in such concentration and quantity which has the capacity to degrade the environment.<sup>5</sup> Prior to Stockholm Declaration also there were some conventions which tried to regulate the marine pollution due the dumping of hazardous substances<sup>6</sup> but their scope was very limited as it prohibited only few kinds of HS & HW. Till now emphasis was basically on reduction of HW but RIO in 1992 shifted it towards management of HW and introduced Prior informed consent in transportation of hazardous waste. Rio besides providing access to information on hazardous materials<sup>7</sup> also seeks cooperation from member states to prevent all such activities that cause environmental degradation or are harmful to human health.<sup>8</sup> Later Johannesburg summit in 2002 also targeted this wide spreading virus of HW in Paragraph 23 of the Johannesburg Plan of



Implementation and ended discussing labeling of chemicals and consequences and management of chemicals and HW.<sup>9</sup>

Further, The Organization for Economic Cooperation and Development (OECD) recognized and began working on the problem of Trans-boundary movement of wastes in 1983. Since that time, OECD has adopted four legally binding Decisions for its members. These Decisions require advance notification of OECD members receiving wastes, provide for an overall tracking system, and require prior consent of non-OECD states receiving wastes.<sup>10</sup> The OECD Environment committee produced a draft Convention in 1989 which would regulate the international hazardous waste trade.<sup>11</sup> This draft, however, was slanted to protect the interests of industrialized nations who wanted to continue trading in hazardous waste, rather than protecting the interests of developing nations who wish to restrict the trade.<sup>12</sup>

The European Commission (EU) in 1984 adopted the Directive on the Supervision and Control within the

European Community (EC) of the Trans-frontier Shipment of Hazardous Wastes.<sup>13</sup> This first step by EC contains requirements that member states notify the "competent authorities" when shipping hazardous wastes across international borders and also provides them 15 days' time to object. Additionally, the EC Directive requires that the notification of authorities includes information on the source and composition of the waste, the routes the shipment will take, and insurance taken out against damage to third parties.

UNEP in 1982 also recognized this problem of HW and took the task to lay down certain guidelines for environmentally sound management of HW; thereby a group started working on drafting international guidelines in year 1983 which eventually became Cairo guidelines, which was adopted by UNEP in 1987.<sup>14</sup> The Guidelines proposed a prior informed consent mechanism whereby the receiving country must be made fully aware of the nature of the material being



shipped and must impliedly accept the responsibility for proper management of the waste. Cairo Guidelines also contained provisions relating to monitoring, control, remedial action, liability and compensation but the provisions were non-binding and unenforceable on their own, as they were merely directives and were designed only as a code of practice. Later UNEP again engaged its working group to prepare a convention which would implement the Cairo guidelines and establish "a mechanism which would ensure adequate control and full availability of information on trans-boundary movements of hazardous waste and to prevent imports or exports that did not meet basic environmental standards". Finally in 1989 a detailed and specific convention draft was prepared known as Basel Convention.<sup>15</sup>

Basel convention or Convention on the Control of Trans-Boundary Movement of Hazardous Waste 1989 brought a sense of relief and hope for developing and least developed countries that now they will not be treated as dumping

ground by developed nations. The Convention sets out three key objectives, based on recognition of the threat posed by hazardous waste to human health and the environment.<sup>16</sup>

- i. Reduction in the amount of hazardous waste generated.
- ii. Reduction in the amount of trans-boundary movements of hazardous waste.
- iii. Promotion of the Environmentally Sound Management (ESM) of hazardous waste.

Term Environmentally Sound Management (ESM) is convention sounds like taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes.<sup>17</sup>

At present there are 179 parties to Basel convention<sup>18</sup> which is record acceptance by members of family of nations. The Convention places a complete prohibition on trade in



hazardous waste between Parties to the Convention and non-parties<sup>19</sup> and reinforces the sovereign right of any Party to prohibit the import of hazardous waste.<sup>20</sup> In order to achieve the Convention's objective of minimizing the trans-boundary movements of hazardous waste, the Convention requires that such movement only be allowed where the state of export have the technical capacity and suitable disposal sites, or where the wastes are required by the importing state as raw materials for recycling or recovery industries.<sup>21</sup> Though Basel convention was drafted to resolve the issue related to Trans-Boundary trade of hazardous waste, it allows such trade too but such trade must be based on Prior Informed Consent (PIC) whereby origin state or producer has to give notification to competent authority in importing state in writing, mentioning about nature of waste and such trade will be allowed if conducted in accordance to the principles of ESM<sup>22</sup> and adequate waste management is done. A crucial weakness of the Convention

is that the PIC procedure fails to ensure that the exporting country properly verifies that adequate waste management facilities are available in the importing country.<sup>23</sup> Though, Convention places an obligation on both the importing and exporting country to ensure that hazardous wastes that are exported are managed in accordance with ESM,<sup>24</sup> it does not prescribe a particular process by which this information is to be ascertained.<sup>25</sup> Basel convention is criticized here as if such provisions are drafted to suit the needs of developed nation and also it affects the basic objective of this convention i.e. to minimize the movement of hazardous waste. The 2006 Abidjan disaster is one incident which points to a general trend towards a growing trade in dangerous trade in hazardous waste between the developed and developing world.

Again where at one point where Basel convention talks about compete ban on importing and exporting of covered waste<sup>26</sup> it also creates an exception to same by allowing import and export of



covered waste between parties and non-parties, where such trans-boundary movement are subject to Bilateral, Multilateral and regional agreement.<sup>27</sup> Till date 13 Bilateral<sup>28</sup> and 9 Multilateral and regional arrangements<sup>29</sup> are made between various developed and developing countries. Convention also requires the Parties to cooperate with a view to adopting, as soon as practicable, a protocol establishing a framework for liability and compensation for damages results from trans-boundary movements of hazardous waste.<sup>30</sup> The Basel Protocol on Liability and Compensation<sup>31</sup> was eventually adopted after six years of negotiation, at the Fifth Conference of Parties (COP-5) on 10 December 1999. However, nearly 12 years later it is still not in force as only 10 of the minimum of 20 Parties have ratified it.<sup>32</sup> Such facts reveal intention of developed nations in minimizing Trans-boundary movement of hazardous waste.

Further the "Ban Amendment" adopted by parties to Basel Convention is still to be ratified by maximum of countries and thus

ban has still to come into force as it is not ratified by required 3/4<sup>th</sup> parties.<sup>33</sup> As of 06<sup>th</sup> March 2013, only 70 out of the 179 Parties to the Convention had ratified the Ban.<sup>34</sup> The list of Parties which have not ratified the Ban includes major producers of hazardous waste such as the US and Japan as well as developing countries such as India and Pakistan who are major importers of hazardous waste. Ban has yet to be ratified by most non-European developed countries including Japan, US, Canada, Australia and New Zealand (together known as the 'JUSCANZ group'), who are responsible for a significant proportion of global hazardous wastes. As is above mentioned scenario time has come to look for alternatives to Ban the movement of Hazardous Waste. Other than "Ban Amendment", Bamako Convention was signed by members of the Organization of African Unity (OAU) in 1991<sup>35</sup> which placed a complete prohibition on imports of hazardous waste into signatory nations also did not prove to be of much success as Abidjan disaster



occurred in a country that had signed and ratified the Bamako Convention.

### **Comparative Law**

United States, one of the biggest exporter and generator of Hazardous waste enacted a law to regulate and manage HW in year 1976 known as Resource conservation and Recovery Act, 1976 (RCRA) which basically deals with treatment, storage, and wastage of hazardous waste. Later in 1984 certain amendments were made in RCRA and provisions with regard to control on export, obtaining prior consent of importing country and tracking of waste shipments were strengthened. Act besides defining HW also imposes a liability on Generator of waste to minimize its production; store keepers and depositors of waste are required to take prior permission from Environment Protection Agency to commence any activity. Further Transporters are also duty bound to safeguard human health and environment while transporting HW.<sup>36</sup>All these responsibilities are based on good faith. Can the profit grabbers have

'good faith'? Further these responsibilities are not subject to severe accountability, resulting in every day increase in the volume on HW.<sup>37</sup> It seems that US in only pretending by formulating such laws; if it really cares it might have ratified 'Ban Amendment'. Further Export of hazardous waste has been described as "Shambles" by EA Inspector General.<sup>38</sup>

In United Kingdom have general as well as specific legislations with respect to management of HW. Environment Protection Act, 1990 provides for mandatory license in handling of HW and provisions regarding cancellation, surrender and revocation of license<sup>39</sup> & criminal sanctions are also incorporated in case of default. The Special waste Regulations Act, 1996 not only enhances the list of HW and also provide criteria to determine whether a waste is Hazardous or not. It contains detail procedure regarding handling and disposal of waste it also imposes heavy penalty in case of default. Apart from these two there is Health and Safety at Work Act, 1974 under which several



regulations<sup>40</sup> were made which provide detail rules with regard to advertisement, packaging & labeling of dangerous goods carried by road or on railways. In spite of all this there is demand of environment ombudsman in UK.<sup>41</sup>

European community has laid down detail guidelines and issued directives with regard to prevention, recovery and disposal of HW. Later in 1991 amendments in HW directives tried to bring transparency in system and provide access to public about HW management plans, and in year 2000 certain directives were further issued for operating incinerators<sup>42</sup>.

### **Indian Perspective**

The Constitution of India originally, did not contain any direct and specific provision with regard to the protection of natural environment, later in the year 1976 with 42nd constitutional amendment it added direct provisions for the preservation of ecological and biological diversity and thus Art 48A was inserted into Part IV of the Constitution which cast a obligation on state and

correspondingly, a duty on was imposed on every citizen through Art 51 A(g) to protect and conserve natural environment and by this Indian constitution became first constitution in world to incorporate provisions regarding environment. One of the major environmental enactments came just two years after the Stockholm Conference in 1974. The Water (Prevention and Control of Pollution) Act was passed for the purpose of prevention and control of water pollution and for maintaining and restoring the wholesomeness of water. Then, 1980s witnessed the creation of many eco-specific organizations. The Forest (Conservation) Act was passed for the conservation of forests and to check on further deforestation. The Air (Prevention and Control of Pollution) Act of 1981 was enacted which contained several distinguishing features.

In the wake of the Bhopal gas tragedy and Olean gas leak case Government of India enacted the Environment (Protection) Act, 1986. The need for a single authority which could assume the



lead role for environmental protection was answered through the enactment of EPA. It is in the form of an umbrella legislation designed to provide a framework for Central Government to coordinate the activities of various central and state authorities established under previous laws. It is also in the form of an enabling law, which delegates wide powers to the executive to enable bureaucrats to frame necessary rules and regulations.

EPA bans handling of hazardous substances, except in accordance with the prescribed procedure and after complying with the safeguards.<sup>43</sup> Further to be more specific in this regard central government using its rule making power<sup>44</sup> with regard to Hazardous waste<sup>45</sup> framed Hazardous Waste Management and Handling Rules, 1989 which were amended in 2003 and then in 2008 and were finally superseded by Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008. In later part of this section these rules are discussed in detail.

Prior to emergence of environmental legislations and other enactments such as IPC;<sup>46</sup> Torts;<sup>47</sup> The Poison Act 1919; The Explosive Substances Act 1884; The factories Act, 1948 etc. dealt with various kinds of environmental offences, but none of these enactment was specific with regard to HW. First time in year 1968,<sup>48</sup> legislation was drafted with contained list recognizing HW and HS,<sup>49</sup> it also imposes absolute liability in case of default<sup>50</sup> but with many exceptions which paves way for offender to escape.

Jumping directly to HW, Rules of 1989 recognizes 18 categories of Hazardous waste,<sup>51</sup> rules of 1989 were later amended in year 2000 and 2003 and were finally substituted by Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 which provide much detail definition of HW<sup>52</sup> and also contained provisions with regard to meet the present day challenges which were not there in rules of 1989. Provisions or the rules are discussed in following paragraph along with their implementation.



Working on principle: My Waste My Responsibility, occupier of waste is made responsible for environmentally sound Handling of HW<sup>53</sup> and thereby occupier is made duty bound to handle HW in such a way as to prevent accidents and also limit its effect on environment<sup>54</sup> and for this purpose occupier should provide persons engaged with training, equipment's and necessary information to ensure safety.<sup>55</sup> But how many existing industrial establishment have training and transparency system is question to be inquired?<sup>56</sup> This training process which is made responsibility of occupier must be shifted to some independent specialized agency authorized by CPCB or of SPCB which should engage training program for such persons at the cost of the occupier. Rules further talks about granting authorization to a person handling HW and its cancellation by SPCB.<sup>57</sup> Rules provide for a maximum of 90 days to store HW but this period is diluted by granting power to CPCB to enhance this period in certain prescribed conditions.<sup>58</sup> A person who want to Recycle, Reprocess, or

Reuse HW have to apply for registration to CPCB,<sup>59</sup> such registration must after next 5 years.<sup>60</sup> National Inventory of Hazardous Wastes Generating Industries & Hazardous Waste Management in India, February 2009 reveals that out of 62,32,507 Metric Tons of hazardous wastes every year in India 49.55 % is recyclable<sup>61</sup> also import of HW is STILL permitted in India on name of recycling.<sup>62</sup> In this context rules must provide some relaxation in process of registration as to motivate people to establish Recycling plants. But process and volume of recycled waste must be kept transparent and data regarding same must be published on CPCB website (Which is currently not available).<sup>63</sup>

Derived on the basis of MUTUAL HAPPINESS<sup>64</sup> provisions with regard to import and export are incorporated in present rules, though Basel conventions lays down conditions but it is at liberty of state to allow import of HW. Present rules while putting a total ban<sup>65</sup> also facilitate import of HW on name of Recycle, Reuse or



Recovery<sup>66</sup> with prior consent<sup>67</sup> and also in some prescribed cases even without prior consent.<sup>68</sup> As per the official National Inventory of Hazardous Waste Generating Industries, total waste handling capacities of Treatment Storage Disposal Facilities (TSDFs) is about 1.5 million tons per annum (MTA) and there is a deficit of about 1.2 MTA for land fillable wastes and about 0.9 MTA for incinerable wastes. When the country does not have the even the required capacity of TSDF, how can import of hazardous waste be "permitted" in the name of "recycling or recovery or reuse"?<sup>69</sup> It's just like cleaning someone else house before cleaning yours and that too by bringing their waste in your own house. Further there is no clear data available on import and export of HW which could make the situation clearer. It is argued that strictness with regard Import of HW will lead to illegal trafficking in HW, which is a lucrative business in India but by this we are questioning our capability to deal with such instance.

As a consequence of this import policy hazardous waste importers are bringing in lakhs of tons of hazardous waste into India without facing any legal hurdle. Earlier, Environment Ministry Hazardous Waste Rules prohibited import of waste oil, ash and residues from incineration of municipal solid waste, plastic, and unsorted waste scrap. But the same was allowed under the Open General License of the export-import policy of the Commerce Ministry. This led to import of ash and residues from incineration of municipal solid waste has increased by about 130 times during 2006-2009. The import of plastic waste had increased by seven times during this period. Countries such as Netherlands, Germany and the United Kingdom have realized that Indian regulations are hazardous waste friendly. There was a 48 per cent increase in hazardous waste trade import during 2006-2009.

Further, the rules seems to be impotent in dealing with such illegal trafficking and merely passes the provisions to Re-export such HW within 90 days at importer own



cost.<sup>70</sup> It means to me that one can pay and do illegal import and such illegality will not be considered as an offence for 90 day (Better, at least to make it SOUNDS GOOD, if legislature must have mentioned “such waste will be considered illegal if it is not re-exported within 90 days”) intention of legislature to draft strict rules regarding HW can be clearly understood by such provisions.

Chapter 5 of rules deals with Treatment, Storage and Disposal facilities of HW. Rule imposes joint and individual liability on state government, occupier, operator of any facility and any association which is responsible for site identification to establish facility for treatment, storage and disposal<sup>71</sup> which must in accordance with the technical guidelines issued by the CPCB in this regard<sup>72</sup> guidelines issued in this respect nowhere mentions about type of facilities used to treat HW, they more or less speaks about Environmentally Sound Management of HW, consent by the authorities (which is merely repetition of what is mentioned in

rules) and post closure care.<sup>73</sup> It is really strange to believe that in era of modernization and world of science, no modern technology is used for treatment of HW.

Chapter 6 of rules deals with Packaging, Labeling and Transportation of HW. Rules say packaging and labeling must be done in accordance with the guidelines issued by CPCB<sup>74</sup>, but no detail guidelines are available in this respect. Such labeling must be easily visible and must withstand physical conditions and climatic factors.<sup>75</sup>

Transportation of HW must be done in accordance with the present rules, Rules made by central government under Motor Vehicle Act and other guidelines issued by CPCB.<sup>76</sup> Guidelines in this respect say that, Transport carrying HW must be registered with Ministry of Environment and Forest, and HW must be transported in specified transport vehicles (May be guidelines are talking about special vehicles designed to transport HW) and further training must be provided to drivers and helpers carrying



HW.<sup>77</sup> How many of these guidelines are really followed is a matter of investigation, and again I will recommend that such responsibility must be shifted to State Boards to train and educate these drivers and helpers at cost of employers, and only such train personnel be allowed to transport HW. Occupier of HW must obtain a No Objection Certificate from both the receiving state and generating.<sup>78</sup> Occupier must also inform SPCB of all the states from which such waste will be transmitted.<sup>79</sup> Further in order to comply with the principles of Basel convention, rules are made with regard to manifest system, whereby forms of different colors are to be given to prescribed authorities,<sup>80</sup> through which HW may be located in transit. This manifestation system is purely Indian in nature, at times when world is looking forward towards GPS techniques in vehicles; we still focus on colored forms. Technology brings perfectness and transparency along with it, which is present, utmost requirement in dealing and managing of HW.

Coming to punishment part, Occupier, Importer, transporter and operator of facility will be made liable to damage caused to environment and third party due to IMPROPER handling or disposal of HW<sup>81</sup>. In light of irreparable harm cause to individuals and environment due to HW accidents and mass disaster caused in Bhopal and various other recent accidents, can a person handling HW; be allowed to go, by just proving that he handled waste PROPERLY. If that is so, then who will be responsible for such damage? Further Rules only prescribe financial penalty, which is yet not fixed and is left at sweet discretion of CPCB. Is it not the time to amend these penal provisions and incorporate some strict penalty (with imprisonment) to make people handling and disposing HW to realize how sensitive their job is and to make them sense their responsibility while carrying out their job?

#### **Judicial approach:**

The supreme court of India has declared time and again that the right to healthy environment is



fundamental right, though not expressly mentioned in Constitution it is implicit within the penumbra of the right to life and personal liberty therefore supreme court has entertained writ petitions under art 32.<sup>82</sup> In M.C. Mehtav. Union of India,<sup>83</sup> Justice Bhagwati observed that there is an element of Hazard or risk inherent in the very use of science and technology and it is not possible to totally eliminate such hazards. We can only hope to reduce the elements of hazards after taking all necessary steps, he further issued certain guidelines:

- An enterprise which is engaged in hazardous industry which poses a potential threat to the health and safety of persons working and living in vicinity is under an obligation to provide that its activities will be conducted with highest standard of safety and it would be no answer to the enterprise to say that it had taken all reasonable care and that occurred without any negligence on its part.

In light of above mentioned observation of apex court it is argued that how can rules make a person go if he proves that he handled waste properly.<sup>84</sup> Isn't such provision against the observation of Supreme Court?

In a Public Interest Litigation (PIL) filed in the Supreme Court by an NGO,<sup>85</sup> court constituted a High Powered Committee (HPC) in 1997 to look into the allegations and to submit the report to the Apex court. In its report, committee noted that situation in regard to hazardous wastes in the country is grim. It particularly affects the groundwater system in the country and remediation is very difficult and expensive. It affects a large number of innocent people, workers as well as community, who have to pay for the sin of the other. The HPC also recorded that the approximate number of hazardous wastes generating units is 13,011, out of which 11,138 are authorized by the SPCB. In 2003 Supreme Court appointed a committee which issued 29 directives with regard to hazardous waste. While passing the order, the bench comprising



AltamasKabir and H.L.Gokhale on October 11 took cognizance of the “alarming situation created by dumping of hazardous waste, its generation and serious and irreversible damage to the environment and humans.” It also noted that the dumping violated fundamental rights guaranteed by the Constitution.

Further, from shifting industries using excessive amount of sulphur dioxide which causes acid rain which destroys gleaming white marble of TazMahal,<sup>86</sup> Supreme Court also fixed responsibility of Directors of Plant treating highly polluting and toxic effluent.<sup>87</sup> In *Almitra H Patel V. Union of India*<sup>88</sup> while describing importance of environment in Human life, court brought a very strict action those who paid carelessness in Delhi Municipal Corporation in handling the HW. Then again, In *Karnataka Industrial Development Board V. C.Kenchappa and Ors*<sup>89</sup> Supreme court observed that the dumping of hazardous and toxic waste by industrial plans has resulted in environmental degradation in our country. In light

of the above cases it can be said that Judiciary has done appreciable job and tried to bring reform in effective management of HW but still there is a long journey to be covered for bringing required results in this field.

### Final Words

A brief analysis of International Law, Comparative law, and Indian law with regard to dealing with prospects and problems of effective handling and management of HW one will find that efforts are made by international community to regulate it. Various general and specific conventions are example of the concern shown by international community. Thereby different countries have come up with state laws in giving legitimacy to international conventions, but still it is sad to know that many developed countries have not shown serious concerns to mitigate this problem, the traditional profit oriented approach is the reason behind this, but today what is required is that the countries should share corporate social environment responsibility and



development must be in consonance with environment, they must remember saying of Mahatma Gandhi "Earth provides enough to satisfy every man's needs, but not every man's greed".

Indian experience with regard to management of Hazardous Waste can be traced from Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008. India been a developing nation has different needs and requirements we urgently requires strict laws and policy to safeguard our land from becoming a dumping ground, but it is pity that present rules shows no serious intention about this and they are merely the replica of provisions of Basel convention that too with scientific uncertainty, exemptions, exceptions, by lanes etc. India has still not ratified the Ban Amendment to totally ban the import of hazardous waste in spite of fact that our own waste is left untreated due to lack of resources. Further there are no provisions using technical advancement in dealing with this menace. Though

MoEF has identified various treatments and disposal options we still rely upon disposal of waste is in landfill cum dump sites which are also short in number<sup>90</sup> to deal with present day situation.

Further there are many authorities to deal with HW, but there is no much coordination and cooperation between them. It is time to ripe in one umbrella treatment so as to make the legal control more effective. Efforts must be made at ministerial level to ensure implementation of laws and government should encourage exploring newer technology which is cost effective to handle, regulate, control, regulate and manage HW through proper research and training. Also we should take tough steps to mitigate the illegal import of HW and "Correction" provisions in rules must be replaced by 'Punitive' provisions.

Lastly I'll conclude this paper by words of famous American Humorist **Arthur 'Art' Buchwald**: "And Man created the plastic bag and the tin and aluminum can and the cellophane



wrapper and the paper plate, and this was good because Man could then take his automobile and buy all his food in one place and he could save that which was good to eat in the refrigerator and throw away that which had no further use. And soon the earth was covered with plastic bags and aluminum cans and paper plates and disposable bottles and there was nowhere to sit down or walk, and Man shook his head and cried: Look at this God awful mess."

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<sup>1</sup> Rachel Garson, Silent Spring (1962)

<sup>2</sup> McGraw Hill, 8 Encyclopedia of science and Technology 396 (2007)

<sup>3</sup> Minimizing Hazardous Wastes: A Simplified Guide to the Basel Convention Published by UNEP

<sup>4</sup> Consumer Education & Research Centre V. Union of India (1995) 3 SCC42

<sup>5</sup> Principle 6, Stockholm Declaration, 1972

<sup>6</sup> Convention for the prevention of pollution of the sea by oil, 1958; The convention on prevention of marine pollution by dumping of waste and other materials, 1972;

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The Dumping of waste and other materials conventions, 1972 etc.

<sup>7</sup> Principle 10, Rio Conference

<sup>8</sup> Principle 14, Rio Conference

<sup>9</sup> The key outcome of the summit was: To use and produce chemicals in way that does not lead to significant adverse effects on human health and environment by 2020. To renew the commitment to the sound management of chemicals and of hazardous wastes throughout their lifecycle. To encourage countries to implement the new globally harmonized system for classification and labeling of chemicals as soon as possible, with a view to have the system fully operational by 2008.

<sup>10</sup> EPA, Hazardous waste Management System; Notification Concerning the Basel Convention's Potential Implication for Hazardous Waste Exports and Imports, 57 Fed. Reg. 20602, (May 13, 1992)

<sup>11</sup> OECD Council Resolution, C(89)I(final), reprinted in 12 Int'l Env't Rep. (BNA) No. 3, at 147 (Mar. 8, 1989)

<sup>12</sup> David J. Abrams, Comment, Regulating International Hazardous Waste Trade, 28 Col. J. Tram. L 801 (1990)

<sup>13</sup> Directive on the Supervision and control of the Trans-frontier



Shipment of Hazardous Waste within the European Community, 27 OJ Eur.Comm.(No. L326) 31 (1984)

<sup>14</sup> UNEP, Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes, Annex II, U.N. Doc. EP/GC.14/17(1987)

<sup>15</sup> U.N. Doc. EPIIG.80/L.12 (1989)

<sup>16</sup> Preamble to Basel convention

<sup>17</sup> Article 2(8), Basel Convention

<sup>18</sup> At the time of writing of this paper;

<http://www.basel.int/Countries/StatuseofRatifications/PartiesSignatories/tabid/1290/Default.aspx> (Visited on 5th March, 2013)

<sup>19</sup> Article 4(5), Basel Convention

<sup>20</sup> Article 4, Basel Convention

<sup>21</sup> Article 4(9), Basel Convention

<sup>22</sup> Article 6, Basel Convention

<sup>23</sup> L. Widawsky, 'In My Backyard: How Enabling Hazardous Waste Trade To Developing Nations Can Improve the Basel Convention's Ability to Achieve Environmental Justice', 38/2 Environmental Law 577, 604 (2008).

<sup>24</sup> Article 4 (8), Basel Convention

<sup>25</sup> Article 4(b), Basel Convention

<sup>26</sup> Article 4(5), Basel Convention

<sup>27</sup> Article 11, Basel Convention

<sup>28</sup> <http://www.basel.int/Implementation/LegalMatters/Agreements/BilateralAgreements/tabid/1517/language/en-US/Default.aspx> (Visited on 5th March 2013)

<sup>29</sup> <http://www.basel.int/Implementation/LegalMatters/Agreements/MultilateralAgreements/tabid/1518/language/en-US/Default.aspx> (Visited on 5th March 2013)

<sup>30</sup> Article 12, Basel Convention

<sup>31</sup> Protocol on Liability and Compensation for Damage Resulting from Trans-boundary Movements of Hazardous

Wastes and their Disposal, Basel, 10 December 1999 (hereafter 'Liability Protocol'), available at: <http://www.basel.int/pub/protocol>.

<sup>32</sup> <http://archive.basel.int/ratif/protocol.htm> (Visited on 5th March 2013)

<sup>33</sup> Article 17(5), Basel Convention

<sup>34</sup> <http://archive.basel.int/ratif/ban-alpha.htm> 9(Visited on 6th March, 2013)

<sup>35</sup> The Bamako Convention on the Ban of the Import into Africa and the Control of Trans-boundary Movement and

Management of Hazardous Wastes with in Africa, Bamako, Mali, 30 January 1991, available at: <http://www.africaunion.org/root/au/Documents/Treaties/Text/hazardouswastes.pdf>.



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<sup>36</sup> Hazardous Material Transport ACT, 1990

<sup>37</sup> C.M.Jariwala "Hazardous substance and waste law: Lessons for India" Special issue on climate change and Environmental Law; Vol 52: 3 & 4 Journal of Indian Law Institute, July – December 2010

<sup>38</sup> Hunter and David *et al.*, International Environmental Law and Policy, 2<sup>nd</sup> Ed., 2002, 836

<sup>39</sup> Sec 37 -40, Environment Protection Act, 1990

<sup>40</sup> The control of substances Hazardous to Health Regulation, 2002; The Chemical (Hazard Information and Packaging for supply) Regulation, 2002; The Carriage of Dangerous Goods (Classification, Packaging, and Labeling) and use of Transportable Pressure Receptacles Regulations, 1996.

<sup>41</sup> C.M Yardley, "Environment Law in the UK".

<sup>42</sup> The Hazardous Waste Incinerators Directives, 2000

<sup>43</sup> Sec 8, Environment Protection Act, 1986

<sup>44</sup> Sec 6, 8, 25 Environment Protection Act, 1986

<sup>45</sup> Sec 6 (2) (c), (d), (e), (f) Environment Protection Act, 1986

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<sup>46</sup> Sec 268; Sec 290; Sec 277; Sec 278; Sec 284; Sec286 Indian Penal Code, 1860

<sup>47</sup> Nuisance; Principle of Absolute and Strict Liability; Rayland v. Fletcher etc.

<sup>48</sup> The Insecticide Act, 1968

<sup>49</sup>The Insecticide Act, 1968 contains list placing 151 substances as HW and HS.

<sup>50</sup> Sec 38, The Insecticide Act, 1968

<sup>51</sup> Schedule 1 of Hazardous Wastes (Management and Handling) Rules, 1989 recognizes 18 categories of hazardous waste.

<sup>52</sup> Rule 3 (I) defines HW which contains several properties like: Reactive; Toxic; Flammable; Explosive and Corrosive.

<sup>53</sup> Rule 4 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>54</sup> Rule 4 (5) (i) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>55</sup> Rule 4 (5) (ii) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>56</sup> C.M.Jariwala "Hazardous substance and waste law: Lessons for India" Special issue on climate change and Environmental Law;



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<sup>57</sup> Rule 5 & 6 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>58</sup> Rule 7 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>59</sup> Rule 8 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>60</sup> Rule 8 (3) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>61</sup> National Inventory of Hazardous Wastes Generating Industries & Hazardous Waste Management in India February 2009 made by Central Pollution Control Board Hazardous Waste management Division Delhi. Pg.: 04; Available at:

<http://cpcb.nic.in/wast/hazardouswast/InventoryofHW.pdf>

<sup>62</sup> Rule 13 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>63</sup> [http://cpcb.nic.in/Hazardous\\_wast\\_e.php](http://cpcb.nic.in/Hazardous_wast_e.php) ( Visited on 9th March, 2013)

<sup>64</sup> Industrial nations want to dispose their HW, which is too

costly and difficult in their nations and thus they look towards developing and underdeveloped nations who needs Money to improve their economic status.

<sup>65</sup> Schedule 6 Specifies total ban on 30 type HW

<sup>66</sup> Rule 13 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>67</sup> Schedule 3, Part A includes 42 types of HW on which PIC is required.

<sup>68</sup> Schedule 3, Part B includes 46 types of HW on which PIC is not required.

<sup>69</sup> National Inventory of Hazardous Wastes Generating Industries & Hazardous Waste Management in India February 2009 made by Central Pollution Control Board Hazardous Waste management Division Delhi. Pg.: 55; Available at:

<http://cpcb.nic.in/wast/hazardouswast/InventoryofHW.pdf>

<sup>70</sup> Rule17(2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>71</sup> Rule18 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008



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<sup>72</sup> Rule18 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>73</sup> Guidelines Available at: <http://moef.gov.in/citizen/specinfo/hsmg.html>

<sup>74</sup> Rule19 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>75</sup> Rule19 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>76</sup> Rule20 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>77</sup> Guidelines Available at: <http://moef.gov.in/citizen/specinfo/hsmg.html>

<sup>78</sup> Rule20 (3) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>79</sup> Rule20 (4) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>80</sup> Rule21 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

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<sup>81</sup> Rule25 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>82</sup>M.C. Mehta v. Union of India AIR 1987 SC 982

<sup>83</sup> (1986) 2 SCC; 1986 SCC (Cri.) 122

<sup>84</sup> Rule25 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>85</sup> Research Foundation for science Technology Natural Resource Policy V. Union of India (2005) 10 SCC 510

<sup>86</sup> M.C.Mehta v.Union of India,(1997) 2 SCC 353 (Taz Trapezium case)

<sup>87</sup> U.P Pollution Control Board V. Mohan Meakins Ltd (2000) 3 SCC 745

<sup>88</sup> (2004) 4 Scale 173

<sup>89</sup> AIR 2006 SC 2038

<sup>90</sup> As per the data published by CPCB there are in total 27 Treatment Storage Disposal Facilities and 76 dump sites in country and it around 14 states and 5 union territories does not even have a single dump site. Available at:

<http://cpcb.nic.in/wast/hazardouswast/DumpSites.pdf>