



## 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>

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>10</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>11</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>12</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>13</sup>



At present there are 179 parties to Basel convention<sup>14</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>15</sup> and reinforces the sovereign right of any Party to prohibit the import of hazardous waste.<sup>16</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>17</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>18</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>19</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>20</sup> it does not prescribe a particular process by which this information is to be ascertained.<sup>21</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.



**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>22</sup> Further to be more





specific in this regard central government using its rule making power<sup>23</sup> with regard to Hazardous waste<sup>24</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>25</sup> Torts;<sup>26</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>27</sup> legislation was drafted with contained list recognizing HW and HS,<sup>28</sup> it also imposes absolute liability in case of default<sup>29</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>30</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>31</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>32</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>33</sup> and for this purpose occupier should provide persons engaged with training, equipment's and necessary information to ensure safety.<sup>34</sup> But how many existing industrial establishment have training and transparency system is question to be inquired?<sup>35</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>36</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>37</sup> A person who want to Recycle, Reprocess, or Reuse HW have to apply for registration to CPCB,<sup>38</sup> such registration must after next 5 years.<sup>39</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>40</sup> also import of HW is STILL permitted in India on name of recycling.<sup>41</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>42</sup>

Derived on the basis of MUTUAL HAPPINESS<sup>43</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>44</sup> also facilitate import of HW on name of Recycle, Reuse or Recovery<sup>45</sup> with prior consent<sup>46</sup> and also in some prescribed cases even without prior consent.<sup>47</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>48</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>49</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>50</sup> which must in accordance with the technical guidelines issued by the CPCB in this regard<sup>51</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>52</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>53</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>54</sup>

### 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".

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



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<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; 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> UNEP, Cairo Guidelines and Principles for the Environmentally

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Sound Management of Hazardous Wastes, Annex II, U.N. Doc. EP/GC.14/17(1987)

<sup>11</sup> U.N. Doc. EPIIG.80/L.12 (1989)

<sup>12</sup> Preamble to Basel convention

<sup>13</sup> Article 2(8), Basel Convention

<sup>14</sup> At the time of writing of this paper;

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

<sup>15</sup> Article 4(5), Basel Convention

<sup>16</sup> Article 4, Basel Convention

<sup>17</sup> Article 4(9), Basel Convention

<sup>18</sup> Article 6, Basel Convention

<sup>19</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>20</sup> Article 4 (8), Basel Convention

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

<sup>22</sup> Sec 8, Environment Protection Act, 1986

<sup>23</sup> Sec 6, 8, 25 Environment Protection Act, 1986

<sup>24</sup> Sec 6 (2) (c), (d), (e), (f) Environment Protection Act, 1986



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<sup>25</sup> Sec 268; Sec 290; Sec 277; Sec 278; Sec 284; Sec286 Indian Penal Code, 1860

<sup>26</sup> Nuisance; Principle of Absolute and Strict Liability; Rayland v. Fletcher etc.

<sup>27</sup> The Insecticide Act, 1968

<sup>28</sup>The Insecticide Act, 1968 contains list placing 151 substances as HW and HS.

<sup>29</sup> Sec 38, The Insecticide Act, 1968

<sup>30</sup> Schedule 1 of Hazardous Wastes (Management and Handling) Rules, 1989 recognizes 18 categories of hazardous waste.

<sup>31</sup> Rule 3 (I) defines HW which contains several properties like: Reactive; Toxic; Flammable; Explosive and Corrosive.

<sup>32</sup> Rule 4 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>33</sup> Rule 4 (5) (i) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>34</sup> Rule 4 (5) (ii) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>35</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>36</sup> Rule 5 & 6 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>37</sup> Rule 7 Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>38</sup> Rule 8 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>39</sup> Rule 8 (3) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>40</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>41</sup> Rule 13 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>42</sup> [http://cpcb.nic.in/Hazardous\\_waste.php](http://cpcb.nic.in/Hazardous_waste.php) ( Visited on 9th March, 2013)

<sup>43</sup> Industrial nations want to dispose their HW, which is too



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

<sup>44</sup> Schedule 6 Specifies total ban on 30 type HW

<sup>45</sup> Rule 13 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>46</sup> Schedule 3, Part A includes 42 types of HW on which PIC is required.

<sup>47</sup> Schedule 3, Part B includes 46 types of HW on which PIC is not required.

<sup>48</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>49</sup> Rule17(2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>50</sup> Rule18 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

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<sup>51</sup> Rule18 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>52</sup> Guidelines Available at: <http://moef.gov.in/citizen/specinfo/hsmg.html>

<sup>53</sup> Rule19 (1) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008

<sup>54</sup> Rule19 (2) Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008