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A Legal Review on Industrial Hazardous Wastes in India

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Abstract

India generates 72,34,259 MT of hazardous wastes per annum. Hazardous wastes are considered very harmful to man and environment. The consequences of improper handling and management of hazardous wastes can be disastrous to nation's environment and to the health of its citizens. In order to control and mitigate the problems of hazardous wastes and to protect the human environment, the government of India has enacted Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

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1. Introduction

India generated total of 72,34,259 MT of hazardous wastes (hereinafter HWs) from 2015 to 2016, which was produced from 62,406 industries.[1] Out of which, 35,09,513 MT went to the landfill, 8,73,405 MT to incineration and 28,51,341 MT for recycling.[2] This is a steep increase from the previous data that was published by the Central Pollution Control Board (hereinafter CPCB) in the year 2009, where 36,165 industries generated 62,32,507 MT of

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[1] Central Pollution Control Board, Available at, http://cpcb.nic.in/uploads/Projects/Hadzardous-Waste/Updated_Inventory_HW_Generation.pdf
[2] *Ibid*

HWs annually.[3] Where, 27,28,326 MT went to the landfill, 4,15,794 MT was incinerated and 30,88,387 MT for recyclable wastes.[4]

HWs are considered very harmful to man and environment. The consequences of improper handling and management of HWs can be disastrous to environment and to human health. When HWs are improperly handled, they may leach into soil and groundwater and concentrate in food chains.[5] In order to control and mitigate HWs and to protect the human environment, the government has enacted Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The objective for introducing such Rules is to ensure safe management of hazardous waste which is being generated from different industrial sources.

This article presents a review on the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 which has been completely revamped in the year 2016 by the government to mitigate and address the problems of HWs and other wastes generated from different industrial sources.

2. Historical

The awakening of the Indian legislation to mitigate HWs came in only with the Bhopal gas Tragedy[6], in 1984. On December (2/3) 1984, a large quantity of another toxin, methyl isocyanate gas (MIC), escaped from the Union Carbide plant. This incident killed around 2,600 people[7] (on the spot) while 16,000 people[8] died as a result of the exposure and about 2 lakh were affected by the leakage from Union Carbide India Ltd. There was no specific legislation that existed during the time of the Bhopal Gas to deal with the problems that had arisen. Perhaps during the framing of the Constitution, the framers did not envision such catastrophe would emerge.

In 1972, India as one of the participants at the Stockholm Conference on Human Environment, started to take steps towards protection of environment. Responding to the Stockholm Conference, in the year 1976 India brought change in the Constitution of India. The 42nd Amendment to the Constitution gave environmental protection and improvement a constitutional status through Articles 48A and 51A (g) which was added to the Directive Principles of the State Policy and in the Fundamental Duties.

The Constitution of India under the Articles 47, 48-Aand 51(g) has made provision for the protection and improvement of the environment. Furthermore, Article 253 of the Constitution gives power to the parliament to legislate any laws to implement any international conventions etc. In other words, Article 253 suggests that in the

[3] National Inventory of Hazardous Wastes Generating Industries & Hazardous Waste Management in India, Central Pollution Control Board Hazardous Waste management Division Delhi, February 2009, Available at http://cpcb.nic.in/displaypdf.php?id=aHdtZC9OZXdJdGVtXzE0NV9od19pbnZlbnRvcnlfZmluYWxfcmVwb3J0XzIwMDkucGRm
[4] *Ibid*
[5] Organization for Economic Co-Operation and Development, Trade Measures in Multilateral Environmental Agreements 100 (1999)
[6] *Union Carbide Corporation v Union of India, AIR 1990 SC 273*
[7] S.D. Sengar, *Environmental Liability Regime for Hazardous Industries in India*, Indian Journal of International Law, Vol. 47 (2007) p. 616
[8] Usha Ramnathan, *From Bhopal to Toulouse*, Frontline, Vol. 18, Issue 25, Dec. 08 -21 (2001), December 2001

wake of Stockholm Conference of 1972, Parliament has the power to legislate on all matters related to the preservation of natural environment. Thus, Parliament used Article 253 to enact Environment Protection Act, 1986 to implement the decisions reached at Stockholm Conference in 1972.

The Environment (Protection) Act, 1986 and the Environment (Protection) Rules, 1986 was brought about as a realization of inadequacy of the existing law. The Environment (Protection) Act, 1986 is an umbrella legislation which comprehensively deals with environmental problems and the Environment (Protection) Rules lay down procedures for setting standards of emission or discharge of environmental pollutants. Accordingly, in the exercise of the powers vested upon the central Government by the Act under Sections 6, 8 and 25, the Central Government passed Rules to manage hazardous industrial wastes.

The first set of HWs Rules was released in 1989 as *the Hazardous Wastes (Management and Handling) Rules, 1989*, however these rules were amended extensively over the years and, in 2008, it was replaced by *the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008*. Subsequently, the 2008 Rules was also replaced and has been superseded by the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

3. Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

The main and the primary regulation that addresses HWs in India is the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (hereinafter the Rules). The Rules has been enacted with the objective to ensure safe management of HWs which is being generated from different industrial sources and also for transboundary movement of HWs and other wastes. However, certain wastes are excluded from the ambit of the Rules, radio-active wastes, wastes discharged from ships, waste water and exhaust gases, bio-medical wastes, municipal wastes are excluded because they are covered under relevant Rules. [9]

The Rule has 6 chapters and 8 Schedules. The Rules brought in a new concept "other wastes' (hereinafter OWs), thus categorizing wastes into HWs and OWs. OWs are those wastes that are enlisted and specified in the Part B and Part D of Schedule III for the purpose of import or export and include all such waste generated indigenously within the country.[10] OWs are waste tyre, paper waste, metal scrap, used electronic items etc.

The Rules regulates on industrial discharges (38 processes discharging HWs), export and import, packaging and labelling, transportation, time limit for storing, utilization of wastes and reporting of accidents. It has also laid out specific responsibilities for the Occupier, Operator and duties of the State Pollution Control Board (hereinafter SPCB) for the functioning of the Rules.

[9] *The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016*, Rule 2
[10] *Ibid,* Rule 3 (1) (23)

It is pertinent to note that India having ratified *the Basel Convention*[11] on 24th June 1992, has integrated the Basel Convention in 2016 Rules like in the 2008 Rules. Accordingly, the HWs and OWs whether allowed for import or export (with or without PIC) by this Rule follows the list of numbers and the description of HWs as that of the Basel Convention.[12]

3.1. Responsibility of the Occupier

The Rule fixes the responsibility on the Occupier for the management of HWs and OWs by prevention, minimization, reuse, recycling, recovery, utilisation including co-processing and safe disposal.[13] It is his responsibility for safe and environmentally sound management of such wastes [Rule 4 (2)**.** Also, the Occupier has the responsibility to dispose off wastes that are generated in its establishment by sending or selling to an authorised "actual user"[14] or dispose in an authorised disposal facility and transported in accordance to the provision of the Rule.[15] Thus, if the Occupier intends to treat or dispose his HWs by the Operator (Operator of a treatment, storage and disposal facility), it is the responsibility of the Occupier to furnish specific information as may be needed for safe storage and disposal [Rule 4 (5)]. The occupier has the responsibility to take steps to contain the pollutants, prevent them from any mishaps and their consequences on human environment.[16] It is also his responsibility to provide appropriate training, supply relevant information and equipment that is needed for the safety of the workers.[17]

3.2. State Pollution Control Boards

No Occupier can engage in handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the HWs and OWs without an authorization or permit from the SPCB [Rule 6 (1)] Every Occupier must apply to the SPCB under Form 1[18] for authorisation which must be accompanied by consent (to establish and operate) that is granted by the SPCB under Section 25 of *the Water Act*, *1974*[19] and under Section 21 of *the Air Act*, *1981*[20].[21] Also, if an Occupier desire to renew such authorisation then the application for renewal should contain a self-certified

[11] *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989*
[12] *Supra Note 9*, Schedule III (Part A, Part C and Part D)
[13] *Ibid*, Rule 4 (1) (a) (b) (c) (d) (e) (f)
[14] *Ibid,* Rule 3 (2) "actual user means an occupier who procures and processes hazardous and other waste for reuse, recycling, recovery, pre-processing, utilisation including co-processing"
[15] *Ibid*, Rule 4 (3) (4)
[16] *Ibid*, Rule 4 (6) (a)
[17] *Ibid*, Rule 4 6 (b)
[18] *Ibid,* Form 1- "Application required for grant/renewal of authorisation for generation or collection or storage or transport or reception or recycling or reuse or recovery or pre-processing or co-processing or utilisation or treatment or disposal of hazardous and other waste"
[19] *The Water (Prevention and Control of Pollution) Act, 1974* (25 of 1974)
[20] *The Air (Prevention and Control of Pollution) Act, 1*981 (21 of 1981)
[21] *Supra Note 9*, Rule 6 (1) (a) (b)

compliance report for effluent, emission standards and the conditions specified in the authorisation for HWs and OWs (provided that the renewal is made three months before the expiry of such authorisation).[22]

The SPCB grants authorisation to the Occupier with validity for five years, provided that the SPCB is satisfied that the applicant possesses appropriate facilities[23] and ensuring technical capabilities and equipment complies with the standard operating procedure or other guidelines specified by the CPCB [Rule 6 (2)]. Occupier who has been granted authorisation will maintain record[24] of HWs and OWs managed by him and also submit annual return[25] to the SPCB [Rule 6 (5)]. Furthermore, the authorised actual user of HWs and OWs will have to maintain records of purchased HWs and OWs in a passbook issued by the SPCB along with the authorisation [Rule 6 (7)]. The SPCB maintains a register containing particulars of the conditions imposed under these Rules for management of HWs and OWs which is open for inspection to any interested or affected person [Rule 6 (6)]. In case, an application for authorisation is refused, the SPCB will have to record the reason in writing after giving reasonable opportunity of being heard to the applicant for such refusal [Rule 6 (4)].

Moreover, the SPCB has the power to suspend or cancel an authorization (Rule 7). The Occupier will be given reasonable opportunity of being heard and such reasons will be recorded in writing. The SPCB can suspend or cancel the authorisation which was issued under Rule 6 for such period as it considers necessary in the public interest, if the Occupier fails to comply with any of the conditions of the authorisation or with any provisions of the Act or these Rules [Rule 7 (1)]. After such actions, the SPCB may give directions to the person (whose authorisation has been suspended or cancelled and who will comply with such directions) for safe storage and management of the HWs and OWs [Rule 7 (2)]. Furthermore, if any person is aggrieved by the order of the SPCB whether for suspension or cancellation or refusal of authorisation or its renewal, then he can approach the Appellate Authority (the Environment Secretary of the State) within thirty days from the date on which the order is communicated to him in Form 12[26] of the Rule [Rule 24 (1)].

3.3. Import and Export

Import and export of HWs and OWs are laid out in Rules 12, 13, 14 and 15 and list of such wastes have been listed in Schedule III (Part A, B and D) and Schedule VI of the Rule. The Ministry of Environment Forest and Climate Change (hereinafter MoEFCC) is the nodal Ministry for transboundary movement of the HWs and OWs in accordance with the provisions of these Rules (Rule 11).

[22] *Ibid*, Rule 6 (1) (c)
[23] Facilities for collection, storage, packaging, transportation, treatment, processing, use, destruction,recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the hazardous and other waste, as the case may be. *See* Rule 6 (2)
[24] *Ibid*, Form 3- "Format for Maintaining Records of Hazardous and Other Wastes"
[25] *Ibid,* Form 4- "Form for Filing Annual Returns"
[26] *Ibid,* Form 12- "Application for Filing Appeal Against the Order Passed by State Pollution Control Board"

HWs listed in Schedule III Part A are allowed for import and export with PIC and permission from the MoEFCC. OWs listed in Schedule III Part B and D are allowed for import and export. However, to import OWs listed in Part B, permission from MoEFCC is required and to export such wastes PIC from the importing State is mandatory. Regarding OWs listed in Part D, to import and export such wastes, no PIC or permission is required from MoEFCC. However, the importer must furnish the required information as per the Customs Authorities. HWs and OWs listed in Schedule VI are prohibited for import [Rule 12 (6)]. However, the Rule allows export of such wastes. Therefore, any Occupier intending to export HWs and OWs listed in Schedule VI must make an application to the MoEFCC.

Furthermore, there may be certain HWs and OWs which may be allowed for import and export, even though it is not specified in Schedule III but if it exhibits hazardous characteristics as outlined in Part C[27] of Schedule III. For this kind of wastes, the importer or the exporter are required to obtain prior written permission of the MoEFCC before it is imported to or exported from India, as the case may be [Rule 12 (8)].

Also, every importer whether importing HWs and OWs which may fall under Part A, B and D of Schedule III are required to maintain records of the HWs and OWs that have been imported by him in Form 3[28] and the record should be available for inspection [Rule 13 (7)]. The importer of the HWs and OWs must file annual return in Form 4 to the SPCB [Rule 13 (8)]. Also, import of HWs and OWs (up to 1000 gm or 1000 ml) for sampling purpose (for testing or research and development) will be exempted from required permission for import [Rule 13 (9)]. Furthermore, the Port and Customs Authorities will ensure that shipment is accompanied with the movement document (as specified under Form 6)[29] and the test report of analysis of the waste, consignment (wherever applicable), which is from a laboratory accredited or recognised by the exporting country [Rule 13 (10)]. The Customs may also verify the analysis if there is any suspicion [Rule 13 (10)].

In addition, the Rule prohibits import of HWs and OWs into the country for the purpose of disposal [Rule 12 (1)**]**. However, this prohibition is subject to an exception, thus such wastes are permitted for import only for recycling, recovery, reuse and utilisation including co-processing [Rule 12 (2)]. Moreover, if HWs and OWs are moved contrary to the provisions of this Rule, then the transboundary movement of such wastes will be considered illegal (Rule 15). It will also be considered illegal, if such transboundary movement of HWs and other waste do not conform to the shipping details provided in the movement documents.[30] Furthermore, if such wastes are moved in contravention to *the Basel Convention* and general principles of international or domestic law, then such movement will result in deliberate disposal (dumping) or illegal.[31] Consequently, if such HWs and other waste are found as an illegal import then the importer will have to re-export the waste in question at his cost within 90 days from the date of its arrival into India and such actions will be enforced by the concerned Port and the Custom Authority [Rule 15 (2)]. However, if such wastes are to be disposed, then the Port and the Custom Authority will have to do so

[27] *Ibid*, Schedule III, Part C- List of Hazardous Characteristics
[28] *Ibid*, Form 3- "Format for Maintaining Records of Hazardous and Other Wastes"
[29] *Ibid,* Form 6- "Transboundary Movement- Movement Document"
[30] *Ibid*, Rule 15 (1) (iii)
[31] *Ibid,* Rule 15 (1) (iv)

according with this Rules with the permission from the concerned SPCB of where the Port exists [Rule 15 (2)]. Furthermore, if HWs and other waste are found as an illegal import, but where an importer is untraceable, then such waste can be sold by the Customs Authority to any user who has authorisation under this Rule from the concerned SPCB or such wastes can be sent to the authorised treatment, storage and disposal facility [Rule 15 (3)].

3.4. Storage of HWs and OWs

The Rule has also laid out specific time frame for the storage of HWs and OWs. Such wastes can be stored by the Occupier in their facilities for a period not exceeding 90 days [Rule 8 (1)]. The Occupier will have to maintain records of sale, transfer, storage, recycling, recovery, pre-processing, co-processing and utilisation of such wastes, where such records should be available for inspection. However, the SPCB may extend such period to 180 days if the Occupier is a small generator (up to 10 tonnes per annum of their annual capacity or actual users and disposal facility operators of their annual capacity) or on any justifiable grounds.[32] The SPCB may also extent the period of time if the occupiers do not have access to any treatment, storage, disposal facility in the concerned State or the waste is specifically stored for development of a process for recycling, recovery, pre-processing, co-processing or utilisation.[33]

3.5. Utilisation of HWs and OWs as a resource

The provision for utilization of HWs and OWs (under Rule 9) calls for better management of HWs and OWs. As discussed earlier, the Rules provide hierarchy for management in the sequence of prevention, minimization, reuse, recycling, recovery, co-processing; and safe disposal under Rule 4. Thus, such wastes should be sent for final disposal only when all the rest of the above methods are exhausted. HWs such as spent catalyst, lead acid battery scraps etc. and other waste such as paper waste, waste tyres, etc. are used as raw material by the industries involved in recycling of such waste and also use such wastes as a supplementary resource for material and energy recovery. Thus, utilization of HWs and OWs calls for better management of HWs and OWs in an environment sound manner by using such wastes as a resource

3.6. Treatment, Storage and Disposal Facility

It is the responsibility of the State Government, Occupier, and Operator of a facility or any association of occupiers (individually or jointly or severally) to indentify sites for establishing facility for the purpose of treatment, storage and disposal of the HWs and other waste in the State [Rule 16 (1)]. This kind of facilities can be either captive facility or common facility. Therefore, in view of such, the Operator of common facility or the Occupier of captive facility should design and set up the said facilities as according to the guidelines issued by the CPCB and obtain approval from the SPCB for design and layout [Rule 16 (2)].

[32] *Ibid*, Rule 8 (1) (i) (ii) (v)
[33] *Ibid*, Rule 8 (1) (iii) (iv)

The SPCB will regularly monitor the setting up and operation of the common or captive treatment, storage and disposal facility [Rule 16 (3)]. The Operator and the Occupier will function according to the guidelines or Standard Operating Procedures issued by the CPCB and are also responsible for the said facilities even after post closure phase [Rule 16 (4)]. They are responsible for maintaining records of HWs and OWs handled by them in Form 3[34] and thereby file annual return to the SPCB under Form 4[35].[36] Thereby on receiving such annual returns from the Occupiers and the Operators, the SPCB will prepare an annual inventory of the waste generated, waste recycled, recovered, utilised (including co-processed), waste re-exported and waste disposed and will submit the same to the CPCB every year.[37] Also, the SPCB will also prepare an inventory of hazardous waste generators, actual users, and common and captive disposal facilities and will thereby submit the information to the CPCB every two years.[38] Furthermore, the SPCB will also prepare the consolidated review report on management of HWs and OWs along with its recommendations and forward it to the MoEFCC once in a year [Rule 20 (4)]

3.7. Packaging and Labelling

Another important provision is on Packaging and Labelling HWs and OWs (Rule 17). The Rule mandates that the Occupier (handling HWs and OWs) and the Operator (of the treatment, storage and disposal facility) must ensure that such wastes are packed in a manner which is suitable for safe handling, storage and transport as according to the guidelines issued by the CPCB from time to time.[39] The label of HWs and OWs should be should be visible effortlessly and should be according to Form 8[40] [Rule 17 (1)]. The background colour of the label should be in yellow where the word '*HAZARDOUS WASTES' and 'HANDLE WITH CARE'* must be written in red colour and should be in Hindi, English and also in vernacular language. For the words '*OTHER WASTES'*, it must to be written prominently in orange colour and should be in Hindi, English and also in vernacular language as well. Besides that, the label must be non-washable material and weather proof [Rule 17 (2)].

3.8. Transportation of HWs and OWs

Transportation of HWs and OWs must be according to the provisions of this Rules, *the Motor Vehicles Act, 1988* and guidelines issued by the CPCB [Rule 18 (1)]. As mentioned hereinbefore in the responsibility of the Occupier, the Rule mandates the Occupier to provide relevant information regarding hazardous nature of the wastes and measures to be taken in case of an emergency under Form 9[41] [Rule 18 (2)]. It also mandates that the labelling

[34] *Supra Note 28*
[35] *Supra Note 29*
[36] *Supra Note 9,* Rule 16 (5) & (6), 20 (1) & (2)
[37] *Ibid*, Rule 20 (3)
[38] *Ibid*, Rule 20 (3)
[39] *Ibid*, Rule 17 (1)
[40] *Ibid*, Form 8- "Labelling of Containers of Hazardous and Other Waste"
[41] *Ibid*, Form 9- "Transport Emergency (Trem) Card (To be carried by the transporter during transportation of hazardous and other wastes, provided by the sender of waste)"

should be visible effortlessly, non-washable material and weather proof (as according to Form 8 of the Rule).[42] Thus, if HWs and OWs are being transported for final disposal to a disposal facility (this facility may exist in a State other than the State where the waste is generated), the sender must obtain 'No Objection Certificate' from the SPCB of both the States [Rule 18 (3)]. For transporting HWs and other waste for the purpose of recycling or utilisation (including co-processing), the sender must intimate both the SPCB of the concerned States before handing over the waste to the transporter [Rule 18 (4)]. In the case of transit of transportation of HWs and OWs for the purpose of recycling, utilisation (including co-processing) or disposal through a State other than the States of origin and destination, the sender must send prior intimation to the concerned SPCB of the States of transit before handing over the wastes to the transporter [Rule 18 (5)]. Furthermore, the Rule mandates that the responsibility of safe transport is either on the sender or the receiver, depending on whosoever arranges the transport and has the necessary authorisation for transport from the concerned SPCB [Rule 18 (6)]. Thus, this responsibility must be visible and clearly indicated in the manifest and the authorisation for transport must be obtained either by the sender or the receiver on whose behalf the transport is being arranged. [43]

3.9. Accident

In case of accident that may occur at the facility of the Occupier or Operator or during transportation, SPCB must be immediately informed through telephone and email (Rule 22). Subsequently, they have to prepare a report on the accident under Form 11[44] of the Rule, furnishing complete details of time and date of the accident, sequence of the events leading to accident, details of HWs and OWs involved in accident, date for assessing the effects of the accident on health or the environment, emergency measures taken, steps to alleviate the effects of the accident and steps take to prevent the recurrence of such an accidents (Rule 22). Consequently, the Rule fixes liability on the Occupier, Importer or Exporter and Operator of the disposal facility for all damages caused to the environment or third party due to improper handling and management of the HWs and OWs [Rule 23 (1)]. Besides that, the Occupier and the Operator of the disposal facility will be liable to pay financial penalties as levied for any violation of the provisions under these rules by the SPCB with the prior approval of the CPCB [Rule 23 (2)].

4. Conclusion

The 2016 Rules has emerged to be exceptionally well framed law in promoting and minimization of HWs and OWs from different industrial sources. The provision for utilization of HWs and OWs (Rule 9) calls for better management of HWs and OWs. The Rules provide hierarchy for management in the sequence of prevention, minimization, reuse, recycling, recovery, co-processing; and safe disposal under Rule 4. Thus, such wastes should be sent for final disposal only when all the rest of the above methods are exhausted. HWs such as spent catalyst, lead acid battery scraps etc. and other waste such as paper waste, waste tyres, etc. are used as raw material by the industries involved in recycling of such waste and also use such wastes as a supplementary resource for material and

[42] *Ibid*, Rule 18, (2), Rule 17 (1)
[43] *Ibid*, Rule 18 (6) (7)
[44] *Ibid*, Form 11- "Format for Reporting Accident"

energy recovery. Thus, utilization of HWs and OWs calls for better management of HWs and OWs in an environment sound manner by using such wastes as a resource.

However, this set of Rules is not without a flaw. The main drawbacks that are evident in the Rules are the regulations on minimization and import of HWs and OWs. This is the irony of this Rule, in one hand it advocates for minimization and in the other it allows such wastes to be imported into the country.

The Rules is essentially enacted to curb and mitigate HWs and its discharges from industries and also to regulate the import and export of HWs. The Rule provides hierarchy for management in the sequence of priority of prevention, minimization, reuse, recycling, recovery, co-processing; and safe disposal under Rule 4. Thus, the key objective of the Rules is to minimize the generation of HWs into the environment. However, looking into the data of the CPCB, the industries generating HWs has increased almost two fold and likewise the wastes from these industries. In 2009, where there were 36,165 industries which generated 62,32,507 MT of HWs annually, however, 2015 to 2016 data shows that India generated total of 72,34,259 MT of HWs from 62,406 industries. The data shows contrary to the objective of the Rules, where minimization is rather hardly achieved in spite of the ambitious Rules that have been framed.

Regarding the export and import issue, the Rule prohibits import of HWs and OWs into the country for the purpose of disposal [Rule 12 (1)]. However, this prohibition is subject to an exception. As an exception, such wastes are permitted for import only for recycling, recovery, reuse and utilisation including co-processing [Rule 12 (2)]. Thus, the Rule essentially allows import and export of HWs and OWs but certain restrictions have been imposed for such activities. Moreover, if HWs and OWs are moved contrary to the provisions that have been laid out by this Rule, then the transboundary movement of such wastes will be considered illegal (Rule 15). However, permission for such import though the Rule says it is only for recycling, recovery, reuse and utilisation including co-processing, it clearly shows that the Rule fails to uplift the objective of its Rule, where minimization plays the key role. Such import of HWs and OWs appear to be camouflaging the definition of HWs and OWs into something which is not a waste.

Apart from the 2016 Rules, there are also various Rules that address the management of HWs which include, the Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996, the Batteries (Management and Handling) Rules, 2001, the E-Waste (Management) Rules, 2016, the Bio-Medical Waste Management Rules, 2016, and the Regulation on Persistent Organic Pollutants Rules, 2018 etc. It is essential to remember that all the Rules that have been mentioned above are relevant to HWs and thus have been enacted to mitigate the problems of HWs. However, 2016 Rules has been enacted for safe management of hazardous waste generated from industries. Furthermore, there are also some other Rules though they do not directly address HWs but owning to the fact that these Rules fall within the ambit of the definition of HWs as defined by 2016 Rule i.e., the Plastic Waste Management Rules, 2016 and the Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms Genetically Engineered Organisms or Cells Rules, 1989.