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A Study on History of Hazardous Waste Management and Current Waste Management Rules

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ABSTRACT

The concept of the community waste or society waste is evolved over the period of time, though the amount of waste generated was comparatively small during this era. It was only because of the tainted environment (in modern term “Polluted Environment”); the concept of neo-Hippocratic medicine concept came into practice which was necessary as an effective measure against major cause of human mortality arise out of accumulation of waste materials and epidemic. This has led to the activities towards city cleanliness started in Europe and US mostly during the period of 1750 to 1850 to prevent any possible epidemic. During the same period agriculture was the main activity being carried out throughout the word and use of certain household waste materials was used as manure in agriculture fields. The environment thereby creating adverse impact on an ecosystem and life. With advancements in industrial revolution an enormous amount of industrial waste is being delivered to the environment thereby creating adverse impact on an ecosystem and life. Between the past two generations, the concern related to the harmful effects of the disposal of various industrial wastes on the public health have raised serious debate among and between many professionals from different disciplines within the public health community. From chemical engineering perspective, generation of HW in any industrial process is inevitable and toxicity or hazard associated with this category of waste is the potential for disease or death. Common waste which was predominant earlier includes mostly biodegradable waste having minimum environmental impact. Burning was the only disposal mechanism available. However, in the modern civilization with growth of Industrialization and addition of multidisciplinary aspects to waste, its management becomes an independent subject.

Keywords: hazardous waste, environment, hazardous waste management.

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I. INTRODUCTION

(A) Background:

During the recent years a tremendous progress has been observed with regards to industrial sector especially the manufacturing sector in India, and this has contributed to high economic growth but at the same time it has also given rise to severe environmental pollution more particular due to ineffective handling of waste generated which is termed as Hazardous waste. Hazardous Waste is the major fraction of the wastes generated all over the world, which exhibits certain specific inherent properties with respect to their impacts on the ecology, environment and the living world on the planet. India is the second most populous country, which has about 17% of the world population and 25% of the land area. Due to rapid industrialization during last few decades there is depletion and pollution of precious natural resources in India. Total hazardous waste generated in India due to Industrial activities is about 10 million metric tonnes per annum and only 30% of the total HW generated is treated and disposed of as per the Hazardous Waste Management Rules. This means considerable amount of HW i.e. to the extent of about 70% of annual HW remains untreated and without disposal. This violation is coupled with the serious issue of haphazard dumping of HW all over the places like open areas, low lying areas, water bodies etc. The MoEF (Ministry of Environment and Forests) enacted an umbrella act i.e., the Environment (Protection) Act in 1986 and Rules. Soon the Government of India notified the Hazardous Waste (Management & Handling) Rules in 1989 through the MoEF under the aegis of Environment (Protection) Act, 1986. These Rules were further amended in the year 1991 specifying scientific specifications and norms. Subsequent amendments were carried out by the Central Government in the year 2002 & 2003. Rules of the hazardous waste management are not sufficient in scientific management and handling of such waste. There is a need to handle natural resources with a care in order to save them to fulfill the needs of the future generation.

(B) Scope and Limitation of the study:

The present research covers the existing situation in handling of hazardous substances in India. This paper envisages whether the hazardous waste management rules are sufficient in scientific management and handling of such waste. This research limits the study to the Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the working of the hazardous wastes.

(C) Objectives of the Study:

- (1) To study and analyze the concept of Hazardous waste and to have a comprehensive understanding of its nature, scope and the methods available to handle and dispose the waste.
- (2) To analyze the Indian laws and rules related to management and handling of hazardous waste.
- (3) To examine the role of the higher Judiciary in contributing to the development of environmental jurisprudence and the legal control of Hazardous waste management.
- (4) To suggest for better implementation of hazardous waste management rules and to protect the environment and health of the public.

(D) Research Problem:

In India, Hazardous wastes are the worst type of waste products as they are extremely harmful for the environment and cause significant health hazards. Unfortunately, both large and small scale industries have paid barely any attention in treating hazardous wastes properly, resulting in environmental degradation for years. Many states have not have a proper mechanism for disposal of hazardous waste after the revamped Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 came into effect. The absence of proper infrastructure for scientific disposal and recycling of hazardous waste has resulted in poor handling of such waste in India.

(E) Review of Literature:

Garg, Neha and Adhana, Deepak, "E-Waste Management in India: A Study of Current Scenario" (January 31, 2019), *International Journal of Management, Technology and Engineering* Volume 9(1), January 2019

This article clearly states whenever we think of waste, we think only in terms of garbage or solid/semi-solid waste and not anything else. In the last ten years, e- waste has become a global issue. E-waste recycling is a concept barely in existent in India. As a result, the electronic waste generated is often dumped in rivers or dump yards without proper recycling or treatment. This is hazardous on various levels; for both the environment and personal health. This is hazardous on various levels; for both the environment and personal health.

Pandey, P.K., Management of Municipal Solid Waste in India: A Legal Study (April 2, 2012), *Journal of Science Forum*, Vol. 2 (1), 2011

This article explains the Municipal solid waste has become a challenge before society as it is

neglected subject in the field of environment which is hazardous for the health of human being as well as other creatures too. In general terms, MSW refers to solid wastes from houses, streets and public places, shops, offices, and hospitals. To dispose these wastes in a sound way, the management of municipal wastes is required which involves a planned system of effectively controlling the production, storage, collection, transportation, processing and disposal or utilization of solid wastes.

Singh, Vijay Pal, “Law Relating to E-Waste Management in India: A Critical Study” *BLS Institute of Technology Management; Gitarattan International Business School, (May 11, 2018)*

This article helps to find out The Department of Parliamentary Standing Committee on Science & Technology, environment & Forests in its 192nd Report on the Functioning of the Central Pollution Control Board (CPCB), has concluded that e-waste is going to be a big problem in the future due to modern life style and increase in the living standards of people and augmentation of financial expansion. This paper analyze the available laws relating to e waste management like the Municipal Solid Waste (Management and Handling) Rules, 2000, the Hazardous Waste (Management, Handling & Transboundary) Rules, 2003, the Environment (Protection) Act, 1986, The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, and The E-waste (Management and Handling) Rules, 2011.

(F) Research Questions:

1. Whether the Hazardous waste management rules are efficient in scientific management and handling of such waste?
2. Whether the hazardous waste is the key factor for major pollutions?
3. Whether the principle of polluter pays, precautionary principle is following against Industries?

II. HISTORICAL BACKGROUND OF HAZARDOUS WASTE AND ITS EVOLUTION

In our day to day life numerous items are discarded as waste due to reduction in their effectiveness or value or due to some toxic properties associated with it or simply because we don't need them anymore. This includes daily household waste, sewage from kitchen, waste water from bathroom and toilets, waste from industrial process, hospital waste, packaging, old cars, tyres and tubes, etc. All categories of Waste have adverse impacts on the ecology, environment and public health. Environment Protection has always been a concern from ancient civilization; however specific legal control for environmental protection is a recent

phenomenon.

(A) Meaning of Hazardous Waste

Waste

“Materials that are not products or byproducts, for which the generator has no further use for the purposes of production, transformation or consumption. It also comprises of those materials which are produced during various processes, the consumption of final products, and through other human activities and excludes residuals recycled or reused at the place of generation; and by-product means a material that is not intended to be produced but gets produced in the production process of intended product and is used as such” Solid Waste Management Rules, 2016.

Hazardous Waste

“Any waste which due to the physical and chemical properties, health problems, or even death. The danger is not restricted to human health but to plants, animals and overall ecology. Such dangers are not restricted only due to such waste alone but also due to contact with another material which is reactive nature of such waste. Also this category of waste includes the” Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

a. Protection of Environment in Ancient Era

The Vedas, Puranas, Upanishads and other Hindu scriptures elaborated the importance of trees, forest, water bodies, wildlife etc. in Human life. The Atharva Veda equates trees to various gods. The Yajur Veda emphasized taking care of nature and all its creations. So there was a great amount of check on the protection of the environment from destruction by man. All religions preach the significance of nature to mankind. The Holy Quran emphasized that Nature is created by Allah. Christians are baptized in water which signifies water as the purest form of nature. Sikh religion declares that every creature in this world is the incarnation of God. In fact, all religions in the World give the principle of conservation, preservation and protection of Nature.³

b. Protection of Environment in Historic Era

During the Maurya Dynasty the concern for protection of nature was foremost and well enforced. The Rules pronounced by various Kings during this period directed on city cleanliness and maintenance of hygiene, protection of forests and animals. Notable features which are worth

³ H.S. Sandhu, “*Environment Protection-Constitutional Framework, Law Journal*”, Guru Nanak Dev University, Punjab, Vol.XI,2006, p.78-82.

mentioning here was the concept of penalty evolved during this period for an act like throwing of dirt on roads or water bodies, open defecation in holy places, throwing of dead animals in open areas, etc.⁴

c. Protection of Environment in British Rule

Concept of Civic cleanliness is a major contribution during this period. However, this is also the period when British have exploited the natural resources in India to a large extent. Cutting of forests was rampant during this era for trading purposes.⁵ Although the first provisions for protection of the environment in India finds its place in Indian Penal Code, 1860 which includes both prohibitive as well as punitive provisions. Section 268 of the IPC defined “public nuisance” and Section 133 to 144 of IPC.

d. Protection of Environment Post-Independence

An endeavor towards protection of environment continued with a pace in independent India with a host of Acts, Rules and Regulations in India aimed at protecting the environment from various categories of pollution and hazards. The Environment (Protection) Act, 1986 is an umbrella Act for environment protection and to maintain the ecological balance. Various Governments at Central and state level have launched various plans, programmes, schemes to sensitize the people and arouse their consciousness towards nature and protection and improvement of Environment.⁶

In India major revision in waste management Rules was carried out in the year 2016 by the Ministry of Environment, Forests and Climate Change (MoEF & CC). The waste specific Rules are revamped and notified under the Environmental Protection Act, 1986.

***M.C. Mehta v. Union of India*⁷ (Environment Education Case)**

In this matter, it has directed that the University Grants Commission to prescribe a course on ‘Man and Environment’. Accordingly, the UGC issued a circular to all India Universities to introduce a study course on ‘Environmental Education’. Similar instructions were issued to various Educational Authorities and institutions and at present “Environmental Protection” is a curriculum in Indian Educational Sector.

⁴ Dayal, G. (1994), ‘Solid wastes: sources, implications and management’, *Indian Journal of Environmental Protection*, 14(9), p.672-683.”

⁵ “Shantha kumar, Introduction to Environmental Law, Wadhwa, Nagpur, First Edition, 2004, p.434.

⁶ Anand, K. Khan and Bhatt”, *Law, Science and Environment*”, New Delhi, 1987, p.134-145.

⁷ 1991 SCC (2) 353.

(B) Development in the field of the Protection of Environment

The crucial development in the field of protection of Environment took place after the UNO Stockholm Conference on the Human Environment held in 1972. In the year 1973, the Government of India has set up the National Council for Environmental Policy and Planning with the objective to look after the environment related issues in India which was subsequently converted into the full-fledged Ministry of Environment and Forests (MoEF) in 1985. Presently the same is renamed as Ministry of Environment, Forests and Climate Change (MoEF & CC) having the administrative control of prevention and control of Pollution, regulating and ensuring environmental protection and formulate requisite legal framework in India. MOEF & CC later constituted CPCB, SPCB's and PCC's under the Air Act and Water Act which together constitute as core setup for environment protection in India.⁸

a. Hazardous Waste Management Rules notified from 1989 onwards.

With rapid growth of Industrial sector since early 1980's the new addition of HW to the stream of waste was instrumental. However, during this period there were no method of disposal and the only method which was known was secure captive storage by the individual industrial unit generating HW. Due to space constraint faced by the individual industrial unit in its own premises the units started dumping HW in open areas. The Government's attention was frequently drawn towards environmental damage and the casualties that hazardous chemical substances and toxic wastes can cause due to rapid generation of HW by Industries.⁹ In India the concern and need to manage the hazardous waste generated in the country in a scientific manner was felt only in the mid-eighties after the occurrence of the Bhopal gas tragedy in 1984. The Government's attention was then forced to recognize this new stream of waste and its ill effects. The MoEF (Ministry of Environment and Forests) enacted an umbrella Act i.e., the Environment (Protection) Act in 1986 as a commitment under the Stockholm Conference held in 1972.

b. Revamped HWM Rules notified in 2016 in India

Due to the liberalized policy adopted by the GOI since 1991, the pace of manufacturing sector in India has been accelerated, which has resulted in increasing amounts of hazardous wastes every year coupled with legacy dumps of HW. The HW along with rapidly growing MSW, BMW and E-waste due to population growth, urbanization continues to remain a daunting issue

⁸ Bhatia , "Human Rights and Human Environment – A Study in the Policy Perspectives", ALJ, Vol. 10 (1990) p.39."

⁹ Gupta Manisha, "India and Climate change: Policy Issues", *Encyclopedia of Environment and Development*, New Delhi, p.865-880.

for every Government. The HWM Rules framed in the year 1989 and amended in 2000 failed to give any results towards waste reduction or minimization, reprocessing and recycling. In the era of maximization of profit, reduction of waste was appeared to be an absurd concept. There were no guidelines for clean-up of contaminated and critically polluted Industrial area. No incentives were provided by these Rules to remediate the existing sites. No action was possible against the erring units on account of vague provisions in these Rules.

These rules were amended in 2008 to bring greater clarity to classification of hazardous wastes by linking generation of waste streams to specific industrial processes. Simultaneously, threshold levels for concentration of specified hazardous constituents in wastes were laid down to distinguish between hazardous and other wastes. For regulating imports and exports, wastes had been classified as either 'banned' or 'restricted'.

These Rules were subsequently superseded and revamped and notified as the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016. The distinguishing feature of the rules is that the Rules categorically and specifically differentiate between Hazardous Waste and other wastes. The category of other waste includes left out metals, papers, Waste tubes and tyre, scraps, used electronics materials and devices etc. which can be reused and recycled. These items are treated as resources in numerous industrial processes.

III. CONCLUSION

With the rapid growth of Industrial sector especially manufacturing sector in India the generation of HW will be an inevitable scenario posing serious threats to ecology and environment due to challenges and concerns associated with its safe and scientific disposal mechanism. This has become a global issue and even the developed countries are struggling to handle it. Situation is not different in India but alarming. Non availability of an accurate, reliable and correct data of HW which is lying (legacy waste), generated, transported, disposed of and imported is the biggest challenge in the entire chain of HWM in India. Secondly, an assessment of associated risk and scientific HWM is a crucial link in India between Environment Protection, Law and Policies governing HW and Pollution free environment. Real time data on Hazardous waste generated in India. Moreover, when hazardous waste is produced, it also affects the people in its vicinity and thus must be handled with care. It is essential to have well-informed workers who are aware of the rules and their own rights to be able to protect themselves and support from the government in case of any discrepancies. With the increasing industrial activities, the need for maintaining a balance between economic growth and environment protection grows. No laxity is accepted in the obligation of functioning in an environment-

friendly manner. If organizations do not follow the provided norms, their right to carry out business operations can also be revoked by the State. They are still not able to live a proper healthy life, still children are being born with diseases and complaint it is hard for them to live.

IV. BIBLIOGRAPHY

- 1) Environmental Law and Policy in India - Divan shyam
- 2) Indian Environmental Law: Key Concepts And Principles - Shibani Ghosh
- 3) Environmental Laws in India - P .Lella Krishnan

(A) References

- The Constitution of India, 1950
- Bio-Medical Wastes (Management and Handling) Rules, 1998
- E-waste (Management and Handling) Rules, 2010
- MoEF Guide lines for Management and Handling of Hazardous Wastes, 1991
- The Hazardous Wastes (Management and Handling) Rules, 1989/2000/2003
- The Public Liability Act, 1991
- National Environment Appellant Authority Act, 1997
- National Green Tribunal Act, 2010

(B) Secondary Sources

- Dr.Padma, Hazardous Waste Management Policy and Implementation: The Indian Perspective, Indian Bar Review, vol. XXIX (i) 2002, p.125-19
- Harmeet Singh Sandhu, "Role of Judiciary in Evolution of New Principles of Environmental Jurisprudence", Law Journal, Guru Nanak Dev University, Vol. XVII, 2009, p. 135
- Menon M G "Report of the High Powered Committee on Management of Hazardous Waste", Vol I, II,III, New Delhi, 2001
- Kumar, A. and Samadder, S. R. "A review on technological options of waste to energy for effective management of municipal solid waste, 2017, p.407-422".
- Singh, Vijay Pal, "Law Relating to E-Waste Management in India: A Critical Study" *BLS Institute of Technology Management; Gitarattan International Business School*, (May 11, 2018)
- Maudgal, S. "Waste management in India" *Journal of Indian Association for Environmental Management*, 2009, p. 203-208."
