E-WASTE MANAGEMENT AND ENVIRONMENT PROTECTION: A CRITICAL LEGAL ANALYSIS

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Abstract

"I would feel more optimistic about a bright future for man if he spent less time proving that he can outwit Nature and more time tasting her sweetness and respecting her seniority."

-Elwyn Brooks White

The inquisitive, innovative and keen attribute of human beings has lead to a life full of luxuries bestowed by nature. This very tendency of a normal human being has escorted to the path of development; that has not been restricted to the bare needs of survival, but it has crossed the limits and has gone beyond the extravagance where upcoming modern devices set not only a fashion statement but it has helped the person to categorize his status. The person who has all the new technological machines is presumed to be the member of elite society. This drift has created havoc and great menace to the green and clean environment. Consequently, this trend has enhanced the toxins and hazardous chemicals in the lap of Mother Nature in the disguise of e- waste. E – Waste is a man-made disaster which has posed an immense jeopardize situation to the present generation to cope with its after effects.

From the lanes of villages to the metropolitan cities, not only in India but also around the globe, e-waste has become a foremost danger to health and pollution free environment. This paper will explore the major issue pertaining to the disposal of e-waste and its management. Further, it emphasizes on three R principles i.e. re-cycling, re-use and reduce to eclipse hazardous effects of development on the nature that has nurtured us with utmost care, caution and affection.

This paper will further recommend on adopting the relative legal remedial measures at national and international level to restore

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the real face of earth and not deface it for the sake of our greed for development. That is why the sustainable development is the only silver lining in the era of manmade disasters like pollution and pollutants. The only thirst of this paper is to combat the gigantic problem of e-waste in all humanitarian terms and collectively.

Introduction

The pinnacle of progress of the civilization of mankind is undoubtedly considered as the benchmark achievement for the human beings. In this digital world, man has everything in his domain from things of basic needs to the things of leisure and pleasure. But in this cat and mouse race of development, man has condemned the beauty of nature and he is sparsely concerned about the ecological degradation. The hazardous substances that are prevalent in all elements created by man have resulted into the awesome return gift of development to the nature. Remarkably, the man influences the environment in many ways as human being uses the nature for his development which results in the exploitation of forest wealth like draining out ground water, excavating oil from ground, destroys nature by using chemicals, pesticides and insecticides in agricultural activities etc.; these activities of human beings though necessary, rather unavoidable to certain extent but unscientific use of natural resources likely to give adverse impact on environment[1]. Even the electronic computer, mobile phones and other electronic devices are also synonymous to the environmental hazards.

Presently, worldwide accepted digital lifestyle is responsible for crucial enviro-health concerns and somehow proved as silent killer for human beings. These are lethal treat to the human health and sustainable milieu of life in present and for the future generation too; because it has been aptly said 'as you sow so shall you reap.' The tree of development has gifted so many human friendly technologies to reduce the physical labour, to minimize the distances and connect a person even with any village globally within the reach of a single click; however, the cost of these developments is very heavy. When there is the question of the disposal of these electronic equipments from personal computers, mobile phones and other portable devices also come into the picture, the question of secretion toxic chemicals such as lead, cadmium, mercury, brominates flame retardants, and leaching

[1] Dr. S.C. Tripathi, Environmental Law, Central Law Publication, 3rd Edition, p-486.

plastics are very obvious. This has become the great matter of human worry in every corner of the universe. This aspect is not only concerned with the human health but also affects the fertility of land and quality of water. Most of the electronic goods contain significant quantities of toxic metals and chemicals. If these are left untreated to lie around in landfills or dumps, they cause irreparable loss of life of the soil, water and the atmosphere and results in adverse impacts on human health and ecology[2].

Conceptualization of E–Waste

The e-concept has been very popular among the masses. All of us want to get rid of labour; that is why we are running behind the electronic equipments. E-waste is a popular, informal name for electronic products nearing the end of their "useful life."[3] Electronic waste includes all type of out of use devices that can run electronically and by batteries. Most of these electronic products can be reused, refurbished, or recycled. Unfortunately, electronic discards is one of the fastest growing segments of our nation's waste stream.[4] The tendency to dump the electronic goods from the national and international front is a serious alarm to all of us. The developed nation as are also dumping their e-wastes in the developing countries like India. Developed countries, has brought the e-waste problem in India as well as other developing countries to the brink of spilling over into an acute crisis. The communities that are affected by the toxics in e-waste need not necessarily be those who are responsible for creating the e-waste. The unethical export of e-waste by industrialized nations to developing countries is shifting the onus of development to communities ill-equipped to deal with such waste.[5] A lot of these materials are being sent to developing nations under the guise of reuse- to bridge the digital divide.[6] Electronic waste or e-waste is one of the rapidly growing environmental problems of the world. In India, the electronic waste management assumes greater

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[2] Dr. Md.Zafar Mahfooz Nomani & Anis Ahmad, Need for electronic waste laws in India http://www.countercurrents.org/nomani310508.htm visited on 28th Feb 2012.

[3] Praveen Dalal, E - waste in India, available At http://cyberlawindia.blogspot.com/2006/08/e-waste-in-india.html

[4] http://www.indiainfoline.com/bisc/ari/ewas.pdf#search=%22%22e-waste%20in%20India%22%22 quoted in Praveen Dalal, E - Waste in India, available at http://cyberlawindia.blogspot.com/2006/08/e-waste-in-india.html

[5] http://www.noharm.org/details.cfm?type=document&id=1175#search=%22%22ewaste%20in%20India%22%22 quoted in Praveen Dalal, E - Waste in India, available at http://cyberlawindia.blogspot.com/2006/08/e-waste-in-india.html

[6] http://news.nationalgeographic.com/news/2005/11/1108_051108_electronic_waste.html from ibid.

significance not only due to the generation of our own waste but also dumping of e-waste particularly computer waste from the developed countries[7].

E-Wastes and Advancement of Science and Technology

E-Waste is a hot topic as it is an emerging threat to the environment that cannot be overlooked because the e-product's population has posed a great challenge to control and manage the scraps and old electronic wastes which are assembled all around the globe. The e-waste is also included in the definition of hazardous substance, which means the substance pervades modern industrialized and mechanical process. Though, the e-waste as prima-facie does not seem to be hazardous in terms of Section 2(e) of the Environment (Protection) Act, 1986[8], but still it is inseparable part of the hazardous substances.

In *Mahabir Coke Industry v. Pollution Control Board & Others*[9], the Guwahati High Court has opined that "pollution, be that air, water, noise is a menace to the society and the developed and developing countries like India are facing environmental hazards. With the industrialization of the country, problem of pollution comes in and if it is allowed to go unabated there will be serious health hazards to the mankind." Actually, the electronic waste is a threat to the deplorable quality of the environment because of its disposal is very hazardous process. It is religiously true that in science and technological development, the certain elements of risk are inherent.[10] *In M.C. Mehta v Union of India*[11] the Apex Court has held that;

*"*When science and technology are increasingly employed in producing goods and services calculated to improve the quality of life, there will be certain element of hazard and risk inherent in the very use of science and technology".

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7 http://www.iimm.org/knowledge_bank/9_e-weste-management.htm visited on 9th March 2012.

8 Sec 2(e) EPA, 1986; "Hazardous means any substance or preparation which , by reason of the chemical or physic-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plants, micro-organism, property or the environment".

9 AIR 1998, Gau, 10.

10 Dr. S.C. Tripathi,Environmental Law, Central Law Publication, 3rd Edition, p-487.

11 AIR 1987 S.C. 965.

Adverse Effects of E-Waste

The Constitution of India has guaranteed the right to lead a healthy life as it is a fundamental right within Article 21. Supreme Court verdicts, in cases like Doon Valley[12], Oleum Gas Leakage[13], H - Acid[14], and Noise Pollution (V) in Re[15] etc, has emphasized on the very fact that to live in free and clean environment is the fundamental right of every citizen of India as it forms integral part of Article 21 of Constitution of India. But it is a bitter reality that the electronic waste which is outdated contains various toxic metals and chemicals; that directly or indirectly affects the human health and consequently, suffers due to the fatal consequences of the same. These can hamper the right to lead a healthy life. These toxins have adverse imbalance in the blood systems and cause kidney damages, brain swelling. These may cause unwanted interference in the regulatory hormones and could cause skin diseases, cancer, neurological and respiratory disorders, and infertility not only in women but also in men. The researches show that these health problems are very often in that populace in developing countries that dwell near to the dumping grounds of the e-wastes. One worker in New Delhi quipped that the pay provided for e-waste work is quite high compared to what he could earn while doing any other kinds of labour. According to National Centre for Lead Poisoning, the harmful levels of lead was detected in blood samples collected from Bangalore which are linked to unsafe recycling methods, used initially for batteries, recently this method is used for e-waste[16].

Exposure to toxic substances would result in acute or chronic health effects. Acute effects on health occur soon after a person is exposed to high level toxic substances and it's after effects ranges in severity from temporary rashes to death. Chronic effects, the level varies from low level to long run exposure to such hazardous substance, includes cancers, birth defects, miscarriages and damage to lungs, liver, kidneys and nervous system.[17] Even the radiation of mobiles and other remote sensing techniques are also fatal to human life and health.

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12 AIR 1985 SC 652.
13 AIR 1987 AP 171.
14 (1996) 3 SCC 212.
15 (2005) 5 SCC 733.
16 Dr. Md. Zafar Mahfooz Nomani & Anis Ahmad Need for electronic waste laws in India http://www.countercurrents.org/nomani310508.htm visited on 28th Feb 2012.
17 Shyam Divan and Armin Rosencranz, Environmental Law and Policy in India, second edition, Oxford University Press,p-514.

Abhishek Pratap, Senior Campaigner with Greenpeace India said, "This is not just a victory for the environment but business, as it creates a level-playing field. The rule ensures a transition from the current out-of-sight out-of-mind approach to proper recycling of e-wastes and in the process accelerating the commercial introduction of green electronic products in the market."[18]

Import and Export of E - Waste in Developing Countries

The developed country pressurizes the developing countries like India for the easy disposal of the e-wastes of their countries. They assure that these developing countries to relax the subsidies and carry out the trade with them on their terms and conditions. The United States and Britain are the two largest nations which exports their e-wastes. According to a recent British Environmental Protection Agency Report, Britain shipped out 25,000 tons of e-waste to South Asia last year.[19] These counties are looking towards India and other like nations due to cheap labour cost and less awareness towards the environmental degradation instigated due to e-waste disposal. India usually imports the used hardware of computers and later, they are sometimes converted into the e-waste which enhances the e-wastes in these countries. So it is the right time to make the eco-friendly policies at all front to stop the nuisances that have been caused by the e-waste.

E - Waste Management at International Level

Internationally, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 is the first, foremost, comprehensive and pioneering global environmental treaty to manage the issues of hazardous and other wastes. Being a signatory, India has to follow the rules of the said convention and takes essential steps, in the strict sense, for the management of hazardous wastes and other wastes. India has to take the decision on their trans-boundary movement and disposal thereof, relating it to the environment protection and health concerns. The convention also recognizes the increasing desire for the prohibition of trans-boundary movements of hazardous wastes and their disposal in other States, especially in developing countries. The Convention lays

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18 Subir Ghosh India introduces e-waste law, available At http://asiancorrespondent.com/57215/india-introduces-e-waste-law/visited on 28 Feb 2012.

19 http://www.atimes.com/atimes/South_Asia/HH03Df01.html.

down the general obligations for the Member States which includes minimum reduction of the generation of hazardous and other wastes and substantial reduction of their transboundary movements. The Convention declares that illegal traffic in hazardous wastes or other wastes is criminal. Furthermore, a signatory State cannot ship hazardous waste to any country that has not signed the treaty. A State party to the Convention shall prohibit all persons under its national jurisdiction from transporting and disposing of hazardous wastes or other wastes unless such persons are authorized or allowed to perform such types of operations.[20] The Annexure VIII relates to the hazardous waste list which is also applicable to e-waste[21].

An action programme in the Asia-Pacific region has been conducted to dispose of electrical and electronic waste in an environmentally sound way and stop its illegal trafficking was also launched with the support of the United Nations Environmental Programme's (UNEP) Basel Convention Regional Centers in China, Indonesia and Samoa. It has been perceived that due to rapid industrialization, several developing countries in the Asia-Pacific region need to access large quantities of secondary raw materials. As a result, large amounts of used and end-of-life electronic wastes are being sent to them for recycling, recovery and refurbishment of non-ferrous and precious metals at facilities which do not always meet high environmental standards.[22]

E - Waste Management Laws in India

India has indirect laws to tackle the problems of e-waste management but recently the initiation has been taken by the Government of India with the help of strait legislation and rules to solve the matter of e-waste disposal. Prior to this attempt there are inherent laws at national level to tackle the issues of pollution free environment and regulation and disposal of wastes that is

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[20] Dr.Md.Zafar Mahfooz Nomani & Anis Ahmad, Need for electronic waste laws in Indiahttp://www.countercurrents.org/nomani310508.htm visited on 28th Feb 2012.

[21] A1180: Waste electrical and electronic assemblies or scrap containing components such as accumulators and other batteries included in List A, mercury-switches, glass from cathode-ray tubes and other activated glass, and PCB-capacitors, or contaminated with Annex I constituents (for example, cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they possess any of the characteristics contained in Annexure III(in Praveen Dalal, E - Waste in India, available At http://cyberlawindia.blogspot.com/2006/08/e-waste-in-india.html)

[22] http://www.un.org/apps/news/story.asp?NewsID=16690&Cr=electronic&Cr1= available ibid.

presumed to be hazardous. These laws generally remain oblivious of inadequacy of linkage in handling of hazardous substances and e-waste. The Environment Protection Act, 1986 confers an omnibus power to Central Government to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution including measures to lay down standards for the quality of environment, procedures and safeguards for the handling of hazardous substances, manufacturing process and materials[23].

Apart from this, there are several other rules, policies and related laws that are indirectly or directly related with the e - waste management issues. These have been given as under;

a) DGFT (Exim policy 2002-07): Second hand personal computers (PCs)/laptops are not permitted for import under EPCG scheme under the provisions of para 5.1 of the Exim Policy, even for service providers. Second-hand photocopier machines, air conditioners, diesel generating sets, etc, can also not be imported under EPCG Scheme under the provisions of Para 5.1 of EXIM Policy even if these are less than ten years old[24].
b) 'MoEF Guidelines for Management and Handling of Hazardous Wastes, 1991.
c) Guidelines for Safe Road Transport of Hazardous Chemicals, 1995.
d) The Public Liability Act, 1991.
e) Batteries (Management and Handling) Rules, 2001.
f) The National Environmental Tribunal Act, 1995.
g) Bio-Medical Wastes (Management and Handling) Rules, 1998.
h) Municipal Solid Wastes (Management and Handling) Rules, 2000 and 2002'[25].

Recently the E-waste (Management and Handling) Rule, 2011 places responsibility on the producers for the entire lifecycle of a product, from design to disposal. Apart from Extended Producer Responsibility principle, the rule is a significant step towards

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[23] Dr.Md.Zafar Mahfooz Nomani & Anis Ahmad Need for electronic waste laws in India http://www.countercurrents.org/nomani310508.htm visited on 28th Feb 2012.

[24] Praveen Dalal, E Waste in India, available At http://cyberlawindia.blogspot.com/2006/08/e-waste-in-india.html

[25] PraveenDalal,E-WasteinIndia, available At http://cyberlawindia.blogspot.com/2006/08/e-waste-in-india.html

international standards of Restriction of Hazardous substances in electronics.[26]

These new rules that have been framed by the Ministry of Environment and Forests will be effectively implemented throughout the country from May 1, 2012. Greenpeace has said it a welcoming move to control the e-waste danger.

Conclusion and Suggestions

As new situation arises, the law has to be evolved in order to meet the challenges thrown by such new situations. We have to formulate new principles that would lay down new norms which could adequately deal with the problems that arise in highly industrialized economy.[27] It is a crucial time for the human beings to think over the man-made havoc of e-waste which has endangered the very existence of human beings on the planet earth. The time is not far away, when we have to pay the cost of digital life style by losing our life at the early tenures due to the radiation and radiations caused after disposal of this e-waste. It is the great concern of the 'Inter-Generation Equity Principle' and as the want for development at the cost of life that will be full of diseases need to avoided so follow the underneath suggestions:

- Three R principles – re-use, re-cycle and reduce for minimizing the excessive growth of the electronic products.
- Make the stringent laws to punish the polluter absolutely by following polluter's pays principle and doctrine of absolute liability.
- Give the deterrent means to the Transboundary concerns in the matter of the dumping the e-wastes in the developing countries by the developed countries.

To cope with the disaster of e - waste we have to remember the following rights as the right to own, right to reuse, right to repair, right to resell in market.[28] We have to purchase according to our needs and reuse, moreover, recycle the e-waste materials for the useful reuse. This is the key principle for sustainable development to meet the necessities for the present without compromising the future generation.

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[26] Subir Ghosh India introduces e-waste law, Available at http://asiancorrespondent.com/57215/india-introduces-e-waste-law/visited on 28 Feb 2012.

[27] *M.C. Mehta v. Union of India*, AIR 1987 SC 1086, 1099.

[28] Lexmark vs. Arizona Ink Cartridge Remanufacturers.