Environment Protection and E-Waste Management in India

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Abstract

E-waste is nowadays one of the emerging pollutants which draw the attention of people throughout the world. Management of e-waste is a serious concern for the International community. Pollution caused by it is not only for India but for other developed and developing counties. In absence of any specific legislation on E-waste, the options available are Rules and Regulations made by government in India. The latest introduction of the scheme of the government in the form of E-waste (Management) Rules, 2016 provides an opportunity to look into the existing e-waste management process and also ponder on the effectiveness of the same. The unique feature of Environmental regime in India is to have different legislations on different environmental issues. In order to prevent and control water pollution and air pollution, the Water (Prevention & Control) Act, 1974, the Air (Prevention & Control) Act, 1981 have been enacted by the Parliament. To tackle the issues of environmental protection comprehensively, an umbrella and enabling legislation namely, the Environment (Protection) Act, 1986 has been passed. The Rules of 2016 which replaced 'the E-waste (Management and Handling) Rules, 2011' made under this Act of 1986. There are many issues which require serious consideration and compelling need to make identification and compliance. The matters pertaining to fraudulent traders, environmentally unsound practices and some changes introduced by the new Rules on e-waste management require severe scrutiny and review. Electronic equipments, especially computers, are often discarded by the people from time to time on invention of latest and sophisticated technology which has rendered existing equipments and related knowledge obsolete and undesirable. The process of recycling or collection or taken back policy of e-waste is the need of the hour.

Keywords: *E-waste, Environment, Hazardous waste, Handling, Dealers, Producers.*

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I. Introduction

Environmental awareness is so much significant today as it was never before. The discourse of environmental protection which was started at the latter half of 20th Century has been now in definite shape. The world community appreciated the importance of environment and therefore, the issue of environment protection is the topmost agenda of developed and developing countries. At the time of Stockholm Conference (1972), self assertion of interest of each State was the major premise of the Countries. But, the importance of environment protection was realized by the nations and they favoured global ecological good. Developed and developing countries started to enact different legislations incorporating the environmental concern of that State in their legal system and have also given the due importance to Environmental principles which were emerged at the international level.

There are two developments which compelled to analyse the existing e-waste regime in India. The first is the initiative of the Central government i.e. the constitution of a *high-level committee (2014)* under the chairmanship of *T S R Subramanian* to review key environmental laws. The purpose for constitution of the committee is to fast-track environmental clearances for industrial projects. The committee came out with various important recommendations which met with both appreciation and criticism. The second reason is past experiences regarding e-waste management after making the Rules of 2011. An appraisal of implementation of Rule of 2011 has revealed that desired results have not been achieved by the prescribed authorities due to different reasons. There is need to give thrust on e-waste minimization, recycling, and proper disposal of e-waste. The e-waste management is a crying demand for the sustainability of the environment. The concept of sustainability and claim of environment conservation cannot be translated into reality without taking steps for proper management of e-waste. Therefore, in order to achieve the desired goal of protection of public health and environment, a need has been come up to analyze *the provisions of the E-waste (Management) Rules, 2016*.[3]

This chapter takes a critical look at e-waste management regime in India. It also focuses on the comparative analysis of Rules of 2016 with Rules of 2011.This

[3] The Draft Rules made by Ministry Of Environment, Forest & Climate Change Government Of India, Notification dated 10th June, 2015 G.S.R. 472(E).

chapter also looks on the importance of conceptualizing a sustainable e-waste Framework and acknowledges a greater need to integrate the experiences of the other nations. It has been tried to address the e-waste management issues in the context of India not only through legislative perspective but also addresses environmental and social challenges associated with proper implementation of law.

II. Impact of E-Waste on Environment and Human Health

It is not a conclusion of one or two committees but pointed out by various Committees and Project reports that Environment protection laws which have been enacted with specific purpose, have failed to achieve their objectives. These laws are not stringent enough to adequately deal with the issues relating to domestic waste or hazardous waste including e-waste imported from other countries. Due to absence of any proper strategy and planning for accumulation and recycling, e-waste is creating many environmental problems and posing serious health hazard to the human being.[4] Information technology and globalization are responsible for bringing many unpredictable changes in the world.

The emergence of new information technology transformed the whole pattern of human life. It has contributed much in bringing changes in the life. Countless benefits and generation of wealth to all users are the significant contribution of the information technology. Industrial revolution was mainly praised for improving the quality of life and for creating employment to the people. The globalization accelerated the pace of creativity and potential of innovation. It has significantly affected the rights of consumer and enhanced the availability and affordability of the products to the people. The availability and affordability of products including electronic products made human life more comfortable, secure, easy and faster. Another face of these advancements is indiscriminate use of natural resources and uncontrolled generation of waste including e-waste. The quick development of technology and rising advanced technical innovations and a towering pace of production of new items in the electronics industry have led to unrestrained generation of e-waste. The lure of luxuries life has made people more dependent on whole range of electrical and electronic goods. The

[4] *Ibid at* 2

use of refrigerators, washing machines, computers and printers, televisions, mobiles, i-pods, etc are now days a normal affair. The frequent development of technology and urge of people to have latest product have created electronic waste in large amount. Many of which contain toxic materials. Due to absence of proper disposal system and management, e-waste is posing a serious danger and risk to the environment and human health. We are lacking proper and adequate strategy and technology on tackling these problems.

Significant quantities of toxic metals and harmful chemicals like mercury have been found in the waste of electronic items. The developed countries are taking lead to phase out these substances from the goods.[5] The electronic waste contains many toxic substances such as cadmium and lead, polychlorinated biphenyls, brominates flame retardants, dioxins and furans etc. E-waste is responsible for various chronic diseases to the human beings. It has inclination towards causing serious damage to the vital organs and nervous system of the *homo sapiens*.

The municipality which is already overburdened is expected to deal with the e-waste management. The e-waste management is a cause of concern to the whole world. India is not an exception to it which is facing environmental problems in the management of enormous and mounting quantities of electronic waste. Despite the establishment of various treatment, storage and disposal facilities for hazardous waste management, India is facing acute difficulties in tackling these issues. The reason is inadequate handling capacities of governments and shortage of staff in the agencies. The poor implementation of laws is also a ground of apprehension. The excessive generation of such types of e-wastes and poor management and handling processes are leading to serious pressure to environment degradation.

The crisis of managing of e-waste in India is twin:-

(i) The shortage of recycling mechanism, illiteracy, poverty and lack of awareness are making people in general and women and children in particular more vulnerable to potential danger and serious health hazard of e-waste.

[5] Asha Krishnakumar, 'Importing Danger', *Frontline*, Vol. 20, Issue 25, 06 – 19 December, 2003.

(ii) It is a common tendency of the developed countries to adopt new and advanced technology and discard obsolete and outdated electronic goods. Unfortunately, India is importing these obsolete electronic items and materials from developed countries.

III. Meaning and Concept of E-waste

E-waste or electronic waste may be described as electrical and electronic items or goods which are loosely discarded, surplus, obsolete, broken or damage.[6] Though it is not always true but ordinarily the major form of e-waste are all wastes from electronic and electrical items which have reached their *end- of- life* period. It may also be possible that such items or goods are no longer fit for their original intended use and it is difficult to devise plan for recovery, recycling or disposal. E-waste may be in several forms. Computer and its accessories, TV, remote control, mobile phones, chargers, air conditioners, refrigerators are the household appliances which are found in almost every house and offices.

The recent trend is that people are eager to exchange product with product of latest or new features and technology, even though the earlier product was in working condition or in good state of repairs. This use and throw policy is contributing much in creation of domestic e-waste. The attraction of new and advanced technology is compelling the people to discard electrical and electronic goods merely because they have become old fashioned compared to the latest technology available in the market. The more serious issue is that it is a part of business strategy of the electronic industry to develop new software and come out with latest features in such a way that customer is left with the only option to buy the new products.

Electronic waste may be categorized on the basis of source of their generation into domestic, commercial and industrial waste. E-waste may also be categorized into two categories, one is called as hazardous and another is known as non-hazardous e-waste. One of the unique characteristics of these types of wastes is that decomposition, disintegration, dissolution and alteration of electronic wastes are either impossible or involve longer time. E-waste can be

[6] "Rules on E-waste Management", *The Hindu*, 20 December 2009 available at http://rajyasabha.nic.in/rsnew/_publication_electronic/E-Waste_in_india.pdf (Visited on 13 August 2016)

categorized into the category of hazardous waste because of the presence of many metals, plastics, glass, ceramics, rubber and other items. E-waste generated regularly in all over the world. But the problem of India is more severe than other countries. In India, uncontrolled e-waste generation, dumping of e-waste from other countries and absence of proper mechanism for disposal has been posing serious challenges to the environment. The irony of the situation is that India is not having definite official data on the quantity of toxic waste generated or how much is disposed off. The whole estimation is based on the surveys and reports of informal, unorganized organizations or Nongovernmental organizations. Therefore, accuracy and authenticity of the data is always at risk and suspicious.

Individuals and small business industry are also disposing discarded electronic equipments into landfills which are forming part of solid waste. It is illegal to dispose electronics goods such as computers, mobile phone etc. But, there is no any proper monitoring system on disposal of such waste. E-waste is subject to reuse or recycling or export. Most of the electronic items have very short lifespan. Such goods are required to be replaced at regular interval. Developed countries have option either to discard or export it to the developing countries.[7]

Rule 3(r) of E-waste (Management) Rules, 2016 defines e-waste. 'E-waste' means electrical and electronic equipment, whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes. The expression 'discarded by consumer or bulk consumer' has been newly introduced in the definition by *the E-waste (Management) Rules, 2016.*[8] However, earlier Rules were applicable to consumer and bulk consumer.

Most of the developed countries are having recycling facilities and they are adopting stringent measures regarding disposal of e-waste. Developing countries are lacking such disposal and recycling facilities. However, due to poor economic condition of developing countries and increasing environmental activism in developed countries, they prefer to export discarded e-waste to the

[7] Jayanti Ghosh, 'Digital Dumps', *Frontline*, Vol. 25, Issue-05, March 01-14, 2008.

[8] Under the rule 3(m) of the Draft E-waste Rules, 2015, it means waste electrical and electronic equipment whole or in part or rejects from their manufacturing, refurbishment and repair process which are intended to be discarded as waste.

poorer countries. For both sides, it is profitable or a win-win situation in economic term.[9]

IV. Global Initiatives for E-Waste Management

At the philosophical and theoretical level, all religious teachings engross the concept of protection of environment. Environmental ethics is also part of ancient India. But, there were absence of legal lineage on environmental issues. The international community has done splendid job by organizing United Nations Conference on Human Environment in 1972. This is perhaps the first steps towards formalizing the international environmental law. International environmental law grew and matured with the passing of time by addressing the complex nature of environmental problems and also responding to social, political and economic troubles. *The Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and their Disposal (May 5, 1992)* is an important initiative taken for e-waste management at global level. It is an international treaty which has been designed with special purpose to reduce the movements of hazardous waste between nations. This treaty is specifically made to prevent transfer of hazardous waste from developed to poorer countries. However, the movement of radioactive waste is outside the ambit of the treaty. Through the various meetings of Conference of Parties important steps have been undertaken regarding e-waste management.[10] Besides these, many other measures have been taken at global level to advancing the management and development of environmentally, economically and ethically sound e-waste[11] or

[9] *http://rajyasabha.nic.in/rsnew/publication_electronic/E-Waste_in_india.pdf (Visited on 24 august 2017)*

[10] *Mobile Phone Partnership Initiative (MPPI) June 30, 2010.*

[11] *UN STEP Initiative 2007:* EPA collaborates with the United Nations University - Solving the E-waste Problem. This initiative is a global consortium of companies, research institutes, governmental agencies, international organizations and NGOs which is dedicated to advance the management and development of environmentally, economically and ethically sound waste resource recovery, reuse and prevention.

identification of greener electronic products[12] and collaborating on waste disposal.[13]

The European Union of Countries (EU) have also concentrated on disposal and collection of the e-waste and issued directive regarding collection schemes. Under the scheme, consumers are given job to return their e-wastes free of charge[14] and restriction on use of dangerous substances commonly in electronic and electronic equipment[15]. EU also takes in hand the security of energy supply, energy-related health hazard and environmental issues. EU aimed to make industry more responsible for assessing and managing the risks. They are also given responsibility to provide accurate safety information to their users.[16]

V. E-Waste Management Regime in India

Though Environment (Protection) Act, 1986 is having only 26 sections but it has propensity and potential to cover different dimensions of factors responsible for environmental degradation and ecological imbalances. The peculiar feature of the Act is to empower the Central Government to frame Rules and Regulation under Sections 3, 6 and 25 to deal with different issues which will be necessary for achieving the goal. The Central Government has utilized extensive powers given under the Act and framed various Rules including *the e-waste (Management and Handling) Rules, 2011*.[17] According to Rules of 2011, import of hazardous wastes for disposal was not permitted. However, import of waste was allowed for reuse, recycling or reprocessing. In any State or Union territory,

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[12] *Electronic Product Environmental Assessment Tool (EPEAT)* is an independent rating system that identifies greener electronic products that meet multiple environmental standards.

[13] *United Nations-New Agreement on Electronic Waste March 12, 2012.* This is UN system which collaborates on electronic waste disposal.

14 EU *Directive on Waste Electrical and Electronic Equipment (WEEE) Feb 2003.*

[15] *Restriction of Hazardous Substances (RoHS) Directive Feb 2003*.

[16]*EU Directive on Energy-using-Products (EUP)* and another was *EU Directive on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) June 1, 2007.*

[17] Before the notification of Rules 2011, there were *the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008* which regulate the export and import or any trade or transboundary movements of hazardous wastes including e-waste.

SPCB or Pollution Control Committee is assigned the duty to monitor the units of recycling hazardous wastes.

A. E-Waste (Management) Rules, 2011

In order to solve the problems of pollution in India two legislations namely *the Water (Prevention and Control of Pollution) Act, 1974* and *the Air (Prevention and Control of Pollution) Act, 1981* have been enacted by the Parliament. These two legislations followed by a comprehensive environmental legislation, *The Environment (Protection) Act*, which was enacted 1986 for the first time defined hazardous waste. This Act is an umbrella and enabling legislation. It empowered the executive to made regulations concerning issues relating to environment. On analysis of many judicial decisions of Apex Court, it now become clear that the precautionary principle and the polluter pays principle including other environmental principles have become indispensable attributes of environmental policy of Indian government. The Government of India, has in exercise of its power under Act of 1986 made two specific regulations *namely*, *the Hazardous Waste (Management and Handling) (HWM) Rules and the Batteries (Management and Handling) Rules.*[18] These Rules are somewhat applicable to e-waste. As per HWM Rules, it is now necessary for any companies or individuals receiving, treating, transporting or storing hazardous waste to make efforts to get authorization from the State Pollution Control Board (SPCB).The central government is also empowered to issue authorisation for reuse or process of hazardous waste.

The scope of the Rules was extended by an amendment to the HWM Rules in 2000. By this amendment Rules incorporated the provisions on import and export of e-waste. The old HWM Rules was followed by *the Hazardous Wastes Management, Handling and Transboundary Movement Rules, 2008*. It is advancement over preceding Rules. SPCB is given more power to give prior authorisation on e-waste handling, recycles or reprocess. The Central Pollution Control Board (CPCB) also came out with guidelines on e-waste management in

[18] Though, the Batteries (Management and Handling) Rules exclusively covering lead acid batteries which have very limited impact on e-waste. Nevertheless, this is a remarkable legislative step to implement aspects of extended producers' responsibility (EPR) in India. Under the Rules the collective take-back system for batteries is responsibility of manufacturers, importers and assemblers. The lack of an effective enforcement mechanism for the take back system is mainly a cause of poor implementation.

2008. These guidelines suggested the voluntary adoption of producer responsibility, restriction of hazardous substances (RoHS) in manufacturing. It also suggested the adoption of environmentally sustainable technologies particularly in e- waste recycling.

The piecemeal approaches of Ministries were culminated into a detailed regulation on e-waste management in 2011.*The E-waste (Management and Handling) Rules, 2011*[19] consists of six chapters, three schedules and five forms. The various terms have been defined under the Rules. The Rules of 2011 broadly cover responsibilities of stakeholders, procedure for seeking authorization and registration, storage of e-waste etc. It also prescribes the duties which are to be performed by producer[20], consumer or bulk consumer[21], collection center[22], dismantler[23], recycler[24] and regulatory authority. Rules also prescribe the procedural aspects for seeking authorization and registration for handling e-wastes.

The crucial objective of these rules is to channelize the e-waste and to find out the possibility of recycling of the e-waste.[25] The e-waste producers have been given job to ensure that their waste products and by products and handling of the e-waste do not cause any harm to the environment or create any health hazards. The proper implementation and financing of effective take-back system are the duty of the producers. The Rules mandated the requirement of unique serial number or individual identification code and imposed responsibility for all previously generated waste branded with their name.

E-waste dealers, refurbishers, dismantlers, recyclers and collection centers are required to register with the concern SPCB or PCC. Dealers of electrical equipment have to collect e-waste by giving collection box. They have to share information about the e-waste collection to the SPCB or PCC. The liability on consumer has also been fixed in form of requirement to dispose of e-waste by

[19] Enforced on 1st May, 2012

[20] Rule 4 of The E-waste (Management and Handling) Rules, 2011.

[21] Ibid. Rule 6.

[22] Ibid. Rule 5.

[23]Ibid. Rule 7.

[24] Ibid. Rule 8.

[25] Lamma, O.A. And A.V.V.S. Swamy, "E-Waste and Its Future Challenges In India" *International Journal of Multidisciplinary Advanced Research Trends*, 15(Volume II, Issue I, February 2015).

taking it to authorised dealers and collection centre's. However, large consumers have option to auction their waste. But with they may auction e-waste to authorized collection centre's, dismantlers, recyclers or to the collection services offered by the producers only. SPCB or PCC are primarily given the responsibility to ensure the enforcement. Every institution registered by the authorities shall submit annual report to SPCB or PCC.[26]

The Rules 2011 deals with the imports and seeks total ban on illegal imports. But it fails provide instrument to provide any strategy for prevention of illegal import.

The Rules address the informal sector. The Rules devised mechanism to formalize the informal sector by organization, registration and monitoring of their activities. The rules intend to promote EPR solution. The provisions lack measures to give a definite framework for reducing dismantling operations and promoting collective activities and giving any incentives in informal sector. Implementation of the Rules is another problem. The reasons are numerous. Lack of knowledge and awareness of manufacturer, dealers and consumers are the major factor.

B. **E-Waste (Management) Rules, 2016**

E-Waste (Management) Rules, 2016 consists of 24 Rules. It is divided into six chapters. It also contains different Forms and four Schedules. The Rules of 2016 are advancement over the Rules of 2011. The application of earlier Rules was limited to producers, consumer or bulk consumer, collection centre, dismantler and recycler. The span has been widened. It covers manufacturer, dealer, refurbisher and Producer Responsibility organization. The used lead batteries[27] and radioactive waste[28] have been left out. The reason is very simple there are specific legal provisions on them. The exemption given to the small industries[29] has been taken back. Now, exemption is available to micro industries only. Electrical and Electronic Equipment (EEE) was the subject matter of previous

[26] Umesh Kumar & D. N. Singh, "E-Waste Management through Regulations" *International Journal of Engineering Inventions* 13 (Volume 3, Issue 2 (September 2013, 6-14); http://*www.ijeijournal.com*

[27] These are covered under the Batteries (Management and Handling) Rules, 2001.

[28] It is cover under the Atomic Energy Act, 1962.

[29] The reason is that small industries are the major source of electronic waste generation.

Rules. It was realized that electronic waste is not limited to EEE only; it comprises of components, consumable, spares and parts of EEE. So, the lacuna of previous law has been addressed by new Rules by bringing these within the domain of law. It has also been dealing with the Compact Fluorescent Lamp (CFL) and other mercury containing lamp by enlisting the items in Schedule 1 of the Rules.

There is a significant change in the collection mechanism by making producers exclusively responsible for it. The producer can set up collection centres or point where they can arrange buy back mechanism. The authorization from CPCB or SPCB is now not essential as was under previous Rules.

The noteworthy feature of these rules is the incorporation of Extended Producer Responsibility (EPR) concept. The Rules make provision for fixing of phase wise collection target for producers for the collection of e-waste. Such targets can be either in number or weight. Procedure for authorization and management of e-waste is also a significant change. The adoption of target based approach for implementation of EPR is a new concept in the E-Waste (Management) Rules, 2016[30]. The Rules made provision for Pan India EPR Authorization by CPCB for producers replacing the concept of authorization from SPCBs.

Rules have came up with a defined objectives to establish the responsibilities of manufactures, dealers, collection centres, refurbisher, consumer, bulk consumer, dismantler, recycler and state government. SPCB may grant, cancel or suspend authorization to the manufactures, dealers, collection centres, refurbisher, consumer, bulk consumer, dismantler and recycler.

According to Rule 12, earmarking or allocation of industrial space or shed for e-waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters are the obligation of the Department of Industry or any other government agency authorized by the State Government. Similarly Department of Labour or any other government agency authorized by the State Government is empowered to ensure recognition and registration of workers involved in dismantling and recycling. The department or authorized agency may

[30] MoEF & CC, GoI has notified the E-Waste (Management) Rules, 2016 vide G.S.R. 338(E) dated 23.03.2016 which came into force from 01-10-2016.

(i) assist formation of groups of such workers to facilitate setting up dismantling facilities;
(ii) undertake industrial skill development activities for the workers involved in dismantling and recycling; and
(iii) undertake annual monitoring and to ensure safety & health of workers involved in dismantling and recycling.

The State Government has been also given responsibility to ensure safety, health and skill development of the workers involved in the dismantling and recycling operations. The State Government has to set up integrated plan for effective implementation of these provisions. The government shall have to submit annual report to Ministry of Environment, Forest and Climate Change.[31] In order to ensure proper disposal of electronic waste, duty has been assigned to the Urban Local Bodies to collect and channelized the orphan products to authorized dismantler or recycler.[32]

The introduction of Deposit Refund Scheme is an additional economic instrument. In this instrument, the producer has been empowered to charge an additional amount as a deposit at the time of sale of the electrical and electronic equipment. Such amount is returnable to the consumer along with interest at the end of life of electrical and electronic equipment. This is a positive step and certainly it will reduce the generation of e-waste.

The e-waste exchange between authorized agencies or organizations is another revolutionary effort of the government. Under Rule 19, it is provided that the transportation of e-waste shall be carried out as per the manifest system. Under this system the transporter has to carry a document (three copies) prepared by the sender. Liability of manufactures, dealers, importers transporter, refurbisher, dismantler and recycler for damages caused to the environment or third party due to improper management of e-waste have also been discussed under Rule 21. Such liability may be to levy any financial penalty in case of violation of any provisions of the Rules.

[31] Rule 12 of the E-Waste (Management) Rules, 2016.
[32] Ibid. Rule 24.

VI. Conclusion

There is no doubt that Rules, 2016 has some advantages over Rules of 2011. But it is also not free from its weaknesses. The main weakness of Rules of 2016 is that it has not been capable to take care of measures needed for monitoring and enforcement. The strategy regarding informal sector's regulation and putting imposition of ban on import is not very convincing. Three more stakeholders are included but the Rules also lack proper monitoring of compliance of e-waste management which poses threat to environment and health hazard. The CPCB and SPCB are already overburdened and suffering from shortage of staff. Adding more responsibility to them cannot yield proper result. Sometimes, the other authorities or officers responsible for it are also not able to make proper implementation because of their incapacity. The regulated and restricted import of e-waste is allowed. However, the regulation suffered from many setbacks. It is not easy job for customs officials to check each and every container imported e-goods. The department is already facing the problem of shortage of staff. They are also unable to do random check because of insufficiency of machinery. The scanners available with custom officials have its own limitations. In these circumstances, proper compliance of Rules cannot be expected.

Both sectors formal and informal are struggling hard to come up with their situations. They are struggling hard to survive in the market. The formal sector has more challenges than informal sector. Such difficulty induced them to switch over illegally to informal sectors. Due to huge informal sector, organized sector is lacking proper collection, disposal mechanisms and appropriate technology. Any likelihood of strict control and management of e-waste will depend upon the ability of the respective bodies responsible for enforcement. The financial constraint is another hindrance in proper compliance.

Under the Rules of 2016, it is a mandate of CPCB to prepare any guidelines on various issues including the concept of extended producer responsibility, environmentally sound dismantling and recycling, collection centres, storage, refurbishment, channelization, transportation and random sampling for RoHS testing. CPCB prepared guidelines on EPR except refurbishing and random

testing for RoHS parameters.[33] The praiseworthy approach of Rules of 2016 has been introducing a phase wise Collection Target for e-waste in accordance with EPR Plan. The targets are in increasing order from one year to next coming year. But this advantage has been replaced by making amendment and by this way putting new targets for industries. This is not one time measure. The Ministry of Environment, Forest and Climate Change (MoEF) again on March 22, 2018, came out with more reduced EPR targets. This is done by amending the Rules of 2016.[34] Therefore, the new move of the government to reduce the fixed targets is questionable and doubtful. It raised a serious question on the motive of the government on e-waste management. It is not understandable why the MoEF don't push the industry to fulfill their obligations?

For the proper electronic waste management, the following steps are required to be taken so as achieve the goal of environment protection:

(i) There is an urgent need to create greater awareness among consumers on e-waste management.
(ii) The taken back policy introduced in the Rules of 2016 should be promoted. It may be more successful by giving tax rebate to the firms, institutions or companies using such initiative.
(iii) Efforts should be taken to guard against becoming a place of disposal of e-waste materials by other nations particularly developed states.
(iv) The deposit Refund Scheme as an additional economic instrument is not feasible and it will not help in any way on e-waste management.
(v) It is needless to say that the scientific and technological methods must be employed in handling and recycling process of e-waste.

33 http://www.indiaenvironmentportal.org.in/files/file/Guidelines_for_environmentally_sound_management.pdf (Visited on 8 August 2018)

34 The E-waste (Management) Amendment Rules, 2018.