Awake India to Face E-wastage, is an Emerging Threat to Environment

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ABSTRACT

In ancient days, people lived ecofriendly with primitive technology. People were lived dependent on agricultural and allied activities, and they created some kinds of wastages which were used as manure and raw material for other products. In this era, the modern science and technologies are lead innumerable inventions to make human comfortable. All instruments invented by modern technology creating some kinds of severe wastages and the modern technologies are failed to solve these problems. From last half century, we are suffering due to unsolvable environment related problems like the treatment of sewage, industrial and urban wastages, plastic pollution, air pollution, etc. Along with that management of E- (electronic) wastages is one of the major problems in developed countries and it is an emerging problem in developing countries like India. Keeping this as background, this article reveals issues related with e-wastages in India.

Keywords: E-wastages, environment, management

During the 20th century, science and technology lead an industrial revolution solved many problems and at the same time the wastages created by industries are creating too many environments related problems. Effective management of industrial, domestic and hospital wastages are still a crucial challenge in front of scientists. In these circumstances, rapid increase of E-wastage is one of the emerging threats and very severe problem. India is the 2nd largest populated country with a great potential for marketing of electronic goods. The Indian innate intelligence adopting the technology, liberalization and globalization policies are boosted huge software and hardware industry. Altogether leads a rapid increase of E-wastage and it is becomes one of the severe problems in India. So, it is need of the hour to think and forecast about the e-wastages for effective management.

Meaning of e-wastages

All discarded electronic appliances such as mobile phones, computers which include Cathode ray tubes, Printed circuit board, Chips and other gold plated components, computer wires, plastics from printers, keyboards, monitors, servers, mainframes, monitors, CDs, printers, scanners, copiers, calculators, fax machines, battery cells, transceivers, TVs, medical apparatus, refrigerators, air-conditioners etc., are called e-wastages.

Hazardous e-Wastages

Unlike other wastages an e-wastage having all kind of wastages such as solid, chemicals, gases, etc., pollute all natural elements such as air, water and soil. Like cathode ray tube (CRT) glass, batteries, solder, older

printed circuit boards, batteries, switches, thermostats, fluorescent tubes, nickel-cadmium batteries, printed circuit boards, phosphor coating on CRT glass, plastic, mercury vapor, cadmium dust, beryllium dust, flame retardant dust, lead, barium and other heavy metals, toxic phosphor, glass dust, tin, lead, brominates dioxin etc, are polluting very severely.

Hydrocarbons, heavy metals, brominate substances discharged directly into rivers acidifying flora and fauna. Tin and lead contaminate surface and groundwater and Hydrocarbon ashes released into air, water, soil, etc.

Health Hazards due to e-waste

E-waste disassembly, shredding, compacting and glass breakage creates a fine dust. This dust may contain metals such as lead, cadmium, or beryllium, as well as flame-retardant chemicals. This dust can affect people's health. They can breathe it in or swallow it if dust gets on hands or food. Depending on what is in the dust, the even small amount can be bad for human health.

Solid chemicals and gases altogether affect our health such as chronic damage to the brain, DNA damage, lung cancer, immune system damage, respiratory problems, nervous system, kidney, Lungs, skin, heart, liver, muscles, etc. Anemia, kidney damage, high blood pressure, nerve and brain damage, miscarriage, birth defects, bone problems, lung cancer, possible thyroid hormone problems etc.

CAUSES FOR RAPID INCREASES OF E-WASTAGES IN INDIA

Rapid increases of electricity supply

In India, after independence, the supply of electricity increased rapidly. Through, five year plans the production of electricity increased from various sources such as hydroelectricity, thermal power plants, atomic power plant, and wind mills. Except few geographically challenged areas, most of the urban and rural areas are electrified.

India's stand on liberalizing the Import Rules

The new policies like globalization, liberalization and new trading policies lead huge electronic goods flow in India which is manufactured by reputed and non-reputed industries. In India's export-import policy like the Foreign Trade (Development and Regulation) Act, 1992 allows import of the secondhand electronic goods and letting as donations. The Federation of Indian Chambers of Commerce and Industry (FICCI), the Directorate-General of Foreign Trade (DGFT), EOU (Export Oriented Units), EPZ (Exports Processing Zones), STP (Software Technology Parks) and EHTP (Electronics Hardware Technology Parks) are enjoying the globalization and liberalization policies and are boosting electronic goods flow in India.

Increases of Electronic culture in India

The development of information and communication technology leads people to shift from a traditional culture in modern electronic culture. Beyond that present days people are accounted as material life; like electronic utilities and electronic furniture in the house, mobile phone, laptop, musical instrument, refrigerator, iron box, children's electronic devices, etc. Along with that, most of the fields such as administration, business, education, medical and communication fields are utilizing the electronic devices which are used and thrown.

Changing consumption patterns

The inventions in the field of ICT create changes in consumption patterns. For example, the traditional CRT (Cathode Ray Tube) televisions are replaced by the new flat screen LCD or LED. New technologies and upgrades come into the market almost every few months influencing consumption patterns. All domestic and industrial electronic goods are replaced with advanced technologies. As a result creates the huge amount of abandoned electronic wastages.

Government Policies and Availability of low cast Electronic goods

Due to continuous importance is given by the five year plan the availability and accessibility of electronic products are very easy even for poor people as of today.

In first five year plan (1951-56) and Second five-year plan - (1956 -61) the Industrial development is one of the major objectives. During Sixth, five year Plan (1980 - 85) also it was given importance to Modernization of technologies and Seventh Five-year plan (1985-1990) was concentrated to introduction and application of modern technology are boosted the mushrooming of electrical and electronic industries in India. Along with that the free trade policy, establishment of IT parks, globalization and liberalization are also the major gateways to flow of electronic goods in India.

Rapid Increases of ICT literacy and Social Transition

During the first census report, the educational literacy was (1951) only 18.33 percentage and it was gradually increased as 74.04 percentage in 2011 census. Along with the educational literacy, the Information and communication literacy (ICT) is also increased. The ICT literacy changed the lifestyle of people with electronic devices and the ICT culture made a social transaction in the utilization of electronic devices. For example, in the field of education the teaching and learning processes took place with the help of black board earlier. But, due to modern ICT culture it has been converted into a smart class room, computer assisted learning, online leaning, and mobile learning. People are utilizing single electronic devices for multipurpose and at the same time utilization of different electronic devices for a different purpose. At last, all are thrown out in the form of e-wastages.

Socio-economic status of people

After Independence due to continuous effort of five-year plans, the per capita income has been increased. As the result, the purchasing capacity of common man also increased. So, the household electronic equipment also increased such as Televisions (including sets based on liquid Crystal Display and Light Emitting Diode Technology), refrigerators, washing machines, air conditioners, etc.

E-waste management

There are a number of methods are practiced in e-waste management. Like scientific dismantling by registered units and inappropriate methods like imply open

dumping, open burning, which are often used by the informal sector in developing countries to recover valuable materials, have heavy impacts on human health and the environment. In India according to November 2014th report by the department of environment only 138 units are registered for e-waste management. It is very meager for such a huge country.

Challenges in e-waste management in India

The following few causes are the major challenges in India in the management of e-wastages.

❖ Lack of specific technology options for e-wastage recycling

❖ Absence of sound business model

❖ Lack of implementing environmental act

❖ Lack of awareness in handling of e- wastages

Remedial action need for e- wastage management

❖ Donating while working in good condition,

❖ Creating awareness in utilizing the exchange offer

❖ Boosting the participatory approaches in e-wastage management

❖ Encourage the NGO's in e-wastage management

❖ Prevent the rise in illegal e-waste exports & imports

❖ Need to create awareness towards e-waste legislations

❖ Generating the Producers Responsibility fund for e-wastage management

❖ Encouraging Producers Responsibility organization e-wastage management

CONCLUSION

India is one of the rapidly developing countries and its vision is to become a pollution-free developed country at 2020. On this voyage, India is facing many environments related problems; especially management of e-wastes is one of the emerging problems. When comparing with other wastages e-waste is very dangerous and India stands third in e-waste generation followed by USA and China. Especially from the last few decades, the quantity of e-waste increased very rapidly. But, the effective

collection, storage, and management method are still in need of enhancement. So, it is the need of the hour to think, to create awareness, to do research, to plan and to execute action plan in India to manage e-wastages.

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