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E-Waste and Health Hazards

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Abstract

This paper presents the effect of e-waste on the nature and health hazards caused by them. The main focus of the study was on to understand the electronic-waste facts and how it disturbs the nature and the living things in the world, is there any precaution or solution for the problems. It is a general study related with health, conducted with secondary data. It is find that there are some measures to dispose or recycle the e-waste and thus we can prevent the problems caused by e-waste. The study concludes that we should make others aware about the health hazards caused by e-waste, the seriousness of disposal of e-waste, the ways to dispose it and thus to keep ourselves away from the health hazards caused by e-waste.

Keywords : e-waste, hazards, dispose, recycle, remedy.

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INTRODUCTION

In India the quantity of e-waste has now become a major problem. Disposal of e-waste is am emerging global environmental and public health issue, as this waste has become the most rapidly growing segment of the formal municipal waste stream in the world. E-waste or waste electrical or electronic equipment (WEEE) are loosely discarded, surplus, obsolete, broken, electrical or electronic devices. In India most of most of the waste electronic items are stored at households as people do not know how to discard them. This ever increasing waste is very complex in nature and is also a rich source of metals such as gold, silver and copper, which can be recovered and brought back into the production cycle.

STATEMENT OF THE PROBLEM

This study is to know does the E-waste lead to any problems to the nature and to the health of the living things in the world. We make a lot of E-waste. When electronics end up in landfills, toxics like lead, mercury and cadmium reach into the soil and water. It creates serious issues. As per Green Peace reports more than 20 million tonnes of e-waste is produced every year.

OBJECTIVES

- To find what E-waste means
- To know how E-waste affect the Nature
- To understand how this cause harm to the human body
- Is there any solution for the problems created by E-waste

METHODOLOGY

As this study is meant to know the e-waste and its negative effects on human health and nature, a detailed coverage all over the world is difficult. Therefore the study is based on secondary data which are collected from books, news papers and websites.

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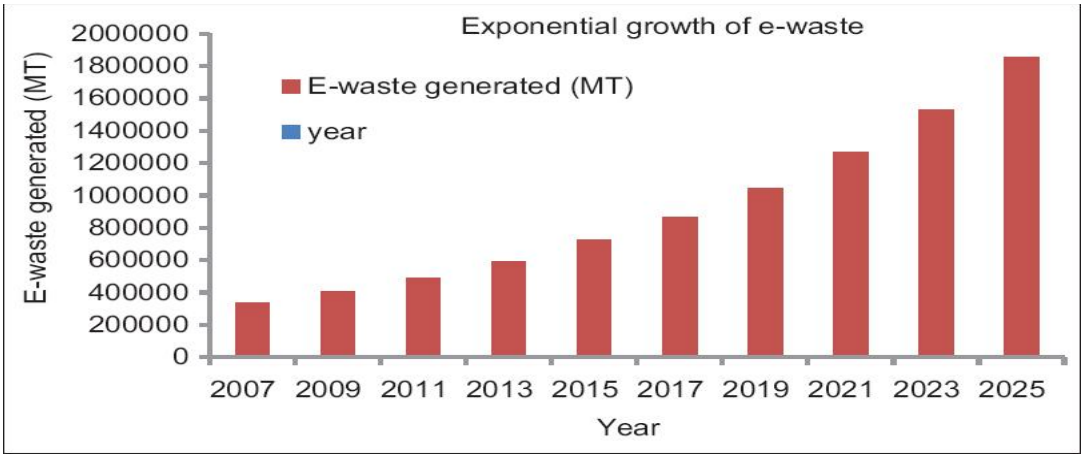
E-WASTE – FACTS & FIGURES

In India solid waste management with the emergence of e-waste has become a complicated task. The total e-waste generated was estimated to be 1, 46,000 tonnes for the year 2005. As per the Green Peace report in 2007 India generated 3, 80,000 tonnes of e-waste. And in 2012, it exceeded to 800,000 tonnes. E-waste represents 2% of America's trash in landfills, but it equals 70% of overall Toxic waste.20-50 million metric tons of E-waste are disposed worldwide every year.Only 12.5% of e-waste is currently recycled.Recycling 1 million laptops saves the energy equivalent to the electricity used by 3,657 US homes in a year. Another reports estimated that in India, business and individual households make approximately 1.38 million personal computers obsolete every year, accelerating the rate of e-waste generation, which is around 10%, annually going to affect environmental health indicators.

COMPOSITION OF E-WASTE

Large Household Appliances	42%
IT Communications Technology	34%
Consumer Electronics	14%
Others	10%



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THE DANGER WITHELECRONICS AND E-WASTE

E-products are quickly obsolete and discarded.In US, we scrap about 400 million units per year of consumer electronics, according to recycling industry experts.E-products become obsolete due to rapid advances in technology.More products are being disposed, even if they still work because of explosive sales in consumer electronics. The danger faced with e-waste is its negative impact on nature and causing health hazards to the living things.

BURDEN OF E-WASTE ON NATURE

We make a lot of E-waste every year. When electronics end up in landfills, toxics like lead, mercury and cadmiumreach into the soil and water. It creates serious issues. It causes air pollution by releasing airborne dioxins, contaminate water by leakage of lead, mercury, arsenic, cadmium etc. and make the soil polluted by discharging toxic particles into soil.

HEALTH HAZARDS DUE TO E-WASTE

Electronic equipments contain many hazardous metallic contaminants such as lead, cadmium and beryllium, chromium, cadmium, sulphur, mercury, plastics, arsenic,polycyclic aromatic hydrocarbons, radiation and so on. The fraction including iron,copper, aluminum, gold and other metals in e-waste is over 60%, while plastic account for about 30% and the hazardous pollutants comprise only about 2.70%. Of many toxic heavy metals, lead is the most widely used in electronic devices for various purposes, resulting in a variety of health hazards due to environmental contamination. Lead enters biological system via food, water, air and soil. Children are particularly vulnerable to lead poisoning- more so than adults because they absorb more lead from their environment and their nervous system and blood get affected.

The metallic contaminants can causedamage to the central and peripheral nervous systems, blood systems and kidney failure, affects braindevelopment of children, asthmatic problems, DNA damage,

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eye and throat irritation, sensory impairmentmemory loss, muscle weakness, immune system damage, reproductive and developmental problems, skin diseases and decrease nerve conduction velocity, lung cancer, causes damages to thyroid, lungs, stomach, reproductive organs and bone marrow, unexplained weight gain, back pain, joint inflammation and stiffness and increased risk of colon (large intestine) cancer.

RESULT AND DISCUSSION

For the e-waste management we can apply the three solutions which are Reduce, Reuse and Recycle. We can reduce the consumption of products that ultimately become e-waste by maintaining older equipment or purchasing higher quality products with a longer useful life. We can reuse products by selling them or donating them to others, especially computer reuse organization, extending their useful life and keeping them out of the waste stream. And we can recycle our unwanted electronics with an environmentally responsible recycler who will either refurnish them for reuse or break them down to commodity level where they can be used again as raw materials.

There are many websites devoted to giving you cash or gift cards for your unwanted gadgets. E-bay's instant sale program allows users to instantly sell or recycle the old devices.Goodwill reconnect program across US will accept any brand of computer equipment. Goodwill either sells or responsibly recycles the products and the money made is used to create job training and employment for people in the community.Before we upgrade to a new device, take a good look at the item we are about to stop using. Un-necessary buying leads to addition of e-waste.Take action where you live to help people to responsibly recycle the e-waste.

ROLE OF SOCIAL WORKERS

Municipality, Panchayath, Corporation, National Service Scheme Camps, and some other group of people like students from various colleges and schools plays an important role in the collection and safe disposal of E-waste.

SUGESSIONS

Even though Government has introduced legal disposal systems for e-waste, we can opt for those products made with fewer toxic constituents. We can reduce our buying and try to organize what you have.We can sell or donate the e-waste or take them back to the store. It seems to be good to learn about

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your local recycling options and talk to Government officials. It will be better if we can educate ourselves and others.

CONCLUSION

It concludes that for the healthy life of human beings, other living things and our nature we have to control the e-waste. We can prevent, minimize, reuse, recycle or dispose the e-waste by logical analysis and actions.Because of the alarming rates at which e-waste is being illegally and dangerously dealt with, many International Government bodies have promised action. Educate others about the seriousness of proper disposal of e-waste and be alert and take necessary actions.

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