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IMPACT OF E -WASTE ON ENVIRONMENT

Mr. Swapnil Balaji Patil
ACS College, Shankarnagar, Tq. Biloli Dist. Nanded (MS)

ABSTRACTS

In nature all the aspects also plays the most important role in the progress of humans. But in today's perspectives the whole environments face the problem of pollution. If the natures face the problem of pollution the effects of pollution effected to the humans also. Present scenario known as global, in the process of globalization the development of the nation totally depending upon the industrialization. The one side of nation belonging to development and also another side consists destroying elements to the nature. When nature affected by the pollution and those affections also destroy all the human beings.

KEY WORDS : *E-waste, Environment.*

INTRODUCTION

Pollution is the effect of undesirable changes in our surroundings that have harmful effects on plants, animals and human beings. This occurs when only short term economic gains are made at the cost of the long term ecological benefits for humanity. No natural phenomenon has led to greater ecological changes than have been made by mankind. During the last few decades we have contaminated our air, water and land on which life itself depends with a variety of waste products.

E-waste, electronic waste, e-scrap and end-of-life electronics are terms often used to describe used electronics that are nearing the end of their useful life, and are discarded, donated or given to a recycler. The UN defines e-waste as any discarded products with a battery or plug, and features toxic and hazardous substances such as mercury, that can pose severe risk to human and environmental health. According to the UN, in 2021 each person on the planet will produce on average 7.6 kg of e-waste, meaning that a massive 57.4 million tons will be generated worldwide. Only 17.4% of this electronic waste, containing a mixture of harmful substances and precious materials, will be recorded as being properly collected, treated and recycled. Many initiatives are undertaken to tackle this growing concern, but none of them can be fully effective without the active role and correct education of consumers.

The International Telecommunication Union (ITU) also indicates that e-waste is one of the largest and most complex waste streams in the world. According to the Global E-waste Monitor 2020, the world generated 53.6 Mt of e-waste in 2019, only 9.3 Mt (17%) of which was recorded as being collected and recycled. E-waste contains valuable materials, as well as hazardous toxins, which make

the efficient material recovery and safe recycling of e-waste extremely important for economic value as well as environmental and human health. The discrepancy in the amount of e-waste produced and the amount of e-waste that is properly recycled reflects an urgent need for all stakeholders including the youth to address this issue.

United Nations Environment Programme (UNEP) also estimated in a 2015 report "Waste Crimes, Waste Risks: Gaps and Challenges in the Waste Sector" that 60-90 per cent of the world's electronic waste, worth nearly USD 19 billion, is illegally traded or dumped each year.

Effect of E - Waste on Environment:

E-waste can be toxic, is not biodegradable and accumulates in the environment, in the soil, air, water and living things. For example, open-air burning and acid baths being used to recover valuable materials from electronic components release toxic materials leaching into the environment. These practices can also expose workers to high levels of contaminants such as lead, mercury, beryllium, thallium, cadmium and arsenic, and also brominates flame retardants (BFRs) and polychlorinated biphenyls, which can lead to irreversible health effects, including cancers, miscarriages, neurological damage and diminished IQs.

A 2019 joint report "A New Circular Vision for Electronics – Time for a Global Reboot" calls for a new vision for e-waste based on the circular economy concept, whereby a regenerative system can minimize waste and energy leakage. The report supports the work of the E-waste Coalition, which includes the ILO, ITU, UNEP, UNIDO, UNITAR, UNU and Secretariats of the Basel and Stockholm Conventions.

According to the report, the improper handling of e-waste is resulting in a significant loss of scarce and valuable raw materials, including such precious metals as neodymium (vital for magnets in motors), indium (used in flat panel TVs) and cobalt (for batteries). Almost no rare earth minerals are extracted from informal recycling; these are polluting to mine. Yet metals in e-waste are difficult to extract; for example, total recovery rates for cobalt are only 30% (despite technology existing that could recycle 95%). The metal is, however, in great demand for laptop, smart phone and electric car batteries. Recycled metals are also two to 10 times more energy efficient than metals smelted from virgin ore. Furthermore, mining discarded electronics produces 80% less emissions of carbon dioxide per unit of gold compared with mining it from the ground.

In 2015, the extraction of raw materials accounted for 7% of the world's energy consumption. This means that moving towards the use of more secondary raw materials in electronic goods could help considerably in reaching the targets set out in the Paris Agreement on climate change. Effect of E - Waste on environment which basically very harmful because through the e waste human are use those instruments on the basis of their needs but those invented things which basically destroy to the hole environment. Those instruments made by human for their better life. When the instrument out dated that time human through those instruments in scrap. In scrap the authorities don't have the solution to recycle or destroy. Whenever authority wants to destroy those instruments that time environment polluted by the smoke of those instruments. Those instruments when destroy that time various types of pollution gases are merge in environment. The effect of E waste can explain as follows:

Climate Change

It is also worth considering the effects electronic goods have on climate change. Every device ever produced has a carbon footprint and is contributing to human-made global warming. Manufacture a tonne of laptops and potentially 10 tonnes of CO2 are emitted. When the carbon dioxide released over a device's lifetime is considered, it predominantly occurs during production, before consumers buy a product. This makes lower carbon processes and inputs at the manufacturing stage (such as use recycled raw materials) and product lifetime key determinants of overall environmental impact.

Lack of Recycling

Recycling rates globally are low. Even in the EU, which leads the world in e-waste recycling, just 35% of e-waste is officially reported as properly collected and recycled. Globally, the average is 20%; the remaining 80% is undocumented, with much ending up buried under the ground for centuries as landfill. E-waste is not biodegradable. The lack of recycling weighs heavily on the global electronic industry and as devices become more numerous, smaller and more complex, the issue escalates. Currently, recycling some types of e-waste and recovering materials and metals is an expensive process. The remaining mass of e-waste – mainly plastics laced with metals and chemicals – poses a more intractable problem.

Approach for Electronics

A new vision for the production and consumption of electronic and electrical goods is needed. It is easy for e-waste to be framed as a post-consumer problem, but the issue encompasses the lifecycle of the devices everyone uses. Designers, manufacturers, investors, traders, miners, raw material producers, consumers, policy-makers and others have a crucial role to play in reducing waste, retaining value within the system, extending the economic and physical life of an item, as well as its ability to be repaired, recycled and reused.

Changes in technology such as cloud computing and the internet of things (IoT) could hold the potential to "dematerialize" the electronics industry. The rise of service business models and better product tracking and take back could lead to global circular value chains. Material efficiency, recycling infrastructure and scaling up the volume and quality of recycled materials to meet the needs of electronics supply chains will all be essential. If the sector is supported with the right policy mix and managed in the right way, it could also lead to the creation of millions of decent jobs worldwide.

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