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“E-waste recycling systems”

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WHAT IS E-WASTE ?

Electronic waste, or e-waste, is a term for electronic products that have become unwanted, non-working or obsolete, and have essentially reached the end of their useful life. Because technology advances at such a high rate, many electronic devices become “trash” after a few short years of use. From older items like VCRs and fax machines to newer technology such as scanners and cell phones, people make over **20 million tons of E-Waste each year**. The global volume of electronic waste is expected to grow by 33% in the next four years, when it will weigh the equivalent of eight of the great Egyptian pyramids.

E-WASTE IMPACTS

E-waste has many toxic chemicals in it such as barium, lead, and mercury which can cause many different **health effects**. Exposure to these chemicals and others in e-waste has been linked to birth defects and organ, skeleton, and nervous system damage. It has also been linked to changes in thyroid function, decreased lung function, and changes in cellular expression and function.

E-waste is also a **huge threat to our environment**. First, one of the most common effect of E-waste on our planet is through air pollution, damaging the atmosphere. Indeed, burning e-waste can be used as a disposal method and a way to get to valuable metals such as copper. The problem with this method is that burning can also release a lot of pollutants into the air.

E-waste also has grave effects on water and soil. When electronics containing heavy metals such as lead, barium, mercury, lithium (found in mobile phone and computer batteries), etc., are improperly disposed, these heavy metals leach through the soil to reach groundwater channels which eventually run to the surface as streams or small ponds of water. In this way, toxic chemicals from e-waste enter the “soil-crop-food pathway,”. These chemicals take a much longer time to fully decompose in a landscape then compared to other materials, so the toxic materials are present for extended periods of time

A BIT OF HISTORY

E-waste was initially dumped into landfills or incinerated. It had taken a while before people started realising the detrimental effects that such reckless means caused the environment and their health. The first step taken towards prohibiting the dump of e-waste was the Resource Conservation and Recovery Act (RCRA), which was enacted in 1976. Since the **Basel Convention in 1989**, it has been likewise illegal to dump e-waste in less developed countries. Since then, recycling plants, which is devoted to taking out reusable parts from discarded electronic equipment items, have opened up around the world, particularly in Asia. Today, we have the technology to make the most out of our e-waste by extracting useful resources from it. The world has indeed come a long way and has an even longer way to go. If each of us takes a step towards ensuring the safe disposal of personal e-waste, we can look forward to a better future and guarantee the safety of our environment, and the legal disposal of e-waste. E-waste contains many valuable and recoverable materials such as aluminum, copper, gold, silver, plastics and ferrous metals. In order to conserve natural resources and the energy needed to produce new electronic equipment from virgin resources, the electronic equipment can be refurbished, reused and recycled instead of being landfilled.

THE CURRENT SITUATION

Even though e-waste contains billions of dollars' worth of precious metals and other valuable components, **just 20 percent was officially tracked and properly recycled** in 2016. Up to 90 per cent of the world's electronic waste, worth nearly US \$19 billion, is **illegally traded** or dumped each year, according to UNEP's "Waste Crimes, Waste Risks: Gaps and Challenges In the Waste Sector".

In the 1990s, governments started to set up e-waste 'recycling' systems and regulations that managed the treatment of hazardous waste and chemical use in the environment. But many countries did not have the capacity to deal with the sheer quantity of e-waste they generated or with

its hazardous nature. Therefore, they began to search for alternatives as to how to dispose of the waste at a lower cost and export the problem to developing countries where laws to protect workers and the environment are inadequate or not enforced. Thus, thousands of tonnes of e-waste are falsely declared as second-hand goods and **exported from developed to developing countries**. Although it is legal to export discarded goods to poor countries if they can be reused or refurbished, much is being sent to developing countries under false pretences and **classified as 'used goods' although in reality it is non-functional**. Few countries understand the scale of the problem, because no track is kept of all e-waste.

Africa and Asia are key destinations for large-scale shipments of hazardous wastes for dumping, causing significant environmental pollution and health risks for local populations. These electronics sometimes arrive broken and unusable, so people attempt to get every penny possible out of the broken electronics. Many turn to a process that involves burning the electronics to try and harvest metals, such as gold, copper and silver, from the electronics. Since most of the people do not have any training on how to properly extract the metals, they end up burning toxic materials and releasing them into the air. Inconsistency in regulations between exporting and importing countries - including what is classified as hazardous or contaminated waste - poses a challenge to effectively combating illegal waste trafficking.

THE ACTIONS TAKEN BY THE U.N.

The Basel Convention came about in response to a number of international incidents related to the disposal of hazardous waste and was the first global and most recognized initiative to address the international e-waste flow. In 1992 the United Nations Basel Convention on the Control of Transboundary Movement of Hazardous Waste and Their Disposal was internationally adopted. The initial goal of the treaty was to control the cross-border movement of hazardous waste and to define what an environmentally management system would look like for hazardous waste. Therefore, exporting e-waste to other countries without

prior written consent granted by the importing country's authorities is illegal.

The number of e-waste **initiatives** taken by the UN has continued to grow each year in order to help Member States to tackle e-waste from a life-cycle perspective. Thus, 20 organisations are active in tackling e-waste and over 150 e-waste initiatives are put in place, with more attention paid to locations more affected by this issue such as Central Africa. All of these initiatives are detailed in the report "United Nations System-wide Response to Tackling E-waste", which highlight the need for strengthened collaboration among United Nations organisations.

THE MAIN PARTIES INVOLVED

- **ILLEGAL E-WASTE EXPORTERS** : The majority of developed countries, such as the United States (largest producer of electronic waste), the United Kingdom, France, Italy, Singapore, Canada, illegally dump e-waste in developing countries, classifying them as 'used goods'.

- **DESTINATIONS FOR E-WASTE DUMPING** :

Ghana and Nigeria are among the largest recipients in West Africa, although high volumes of e-waste are also transported to Nigeria, the Republic of Congo and South Africa. In Asia, China, Hong Kong, Pakistan, India, the Philippines, and Vietnam appear to bear the brunt of illegal e-waste shipments. Many of these developing countries do not have regular rules and policies for controlling e-waste, or of ensuring that it is handled and dismantled responsibly. Local authorities generally do not see e-waste as a high priority and in many cases ignore the issue. Many of these developing governments see the immediate economic incentives and fail to acknowledge the potential negative effects of unsafe disposal.

However, sometimes, these developing countries do take initiatives in order to answer to this unprecedented influx.

Mainland China tried to prevent this trade by banning the import of e-waste in 2000. However, the laws are not working; e-waste is still

arriving in Guiya of Guangdong Province, the main centre of e-waste scrapping in China.

Since 2010, Kenya has implemented an e-waste management project due to the amount of e-waste shipped to the country. The first large-scale recycling facility in east Africa is located in Nairobi where workers can safely deal with the estimated 15,000 tons of electronic waste that are shipped to the country each year.

KEY QUESTIONS TO CONSIDER

- How can we react to illegal e-waste dump in developing countries? Which regulations can be put in place in order to put an end to this situation?
- Knowing that reducing e-waste is at the core of this issue, how can we put in place an efficient recycling system that would not only protect our environment but also stop the illegal e-waste dump?
- Which solutions have already been proposed to put in place an e-waste recycling system? What are their strengths and weaknesses? What can we learn from them?

BIBLIOGRAPHY

- <http://www.bostonelectronicwaste.com/go-green/what-is-ewaste>
- <https://cdrglobal.com/history-of-electronics-recycling/>
- <https://www.linkedin.com/pulse/history-e-waste-karan-thakkar>
- <https://www.omicsonline.org/open-access/effects-of-electronic-waste-on-developing-countries-2475-7675-1000128.php?aid=88750>
- <https://ifixit.org/ewaste>
- <https://www.theguardian.com/environment/2015/may/12/up-to-90-of-worlds-electronic-waste-is-illegally-dumped-says-un>
- <https://ensia.com/notable/electronic-waste/>
- <https://www.rubiconglobal.com/blog-electronic-waste-problem/>
- https://www.researchgate.net/publication/49607064_E-waste_Environmental_Problems_and_Current_Management
- <https://www.unenvironment.org/news-and-stories/press-release/illegally-traded-and-dumped-e-waste-worth-19-billion-annually-poses>
- <https://www.greenpeace.org/archive-international/en/campaigns/detox/electronics/the-e-waste-problem/where-does-e-waste-end-up/>
- <https://www.theguardian.com/global-development/2013/dec/14/toxic-ewaste-illegal-dumping-developing-countries>
- <http://www.atchuup.com/countries-used-as-dumping-grounds-of-worlds-trash/>
- <https://europa.eu/capacity4dev/unep/blog/illegally-traded-and-dumped-e-waste-worth-19-billion-annually-poses-risks-health-deprives-count>
- <http://worldloop.org/e-waste/illegal-flows/>
- <https://unemg.org/images/emgdocs/ewaste/E-Waste-EMG-FINAL.pdf>
- <https://www.unenvironment.org/news-and-stories/story/end-electronic-waste-united-nations-organisations-highlight-their-commitment>
- <https://www.usnews.com/news/articles/2014/08/01/e-waste-in-developing-countries-endangers-environment-locals>
- <https://www.ehn.org/how-much-e-waste-is-shipped-to-nigeria-2561214315.html>